



County of Los Angeles
CHIEF EXECUTIVE OFFICE

Kenneth Hahn Hall of Administration
500 West Temple Street, Room 713, Los Angeles, California 90012
(213) 974-1101
<http://ceo.lacounty.gov>

WILLIAM T FUJIOKA
Chief Executive Officer

August 10, 2010

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

**DEPARTMENT OF PUBLIC WORKS:
STEPHEN SORENSEN COUNTY PARK
GYMNASIUM AND COMMUNITY BUILDING PROJECT
CERTIFY THE FINAL ENVIRONMENTAL IMPACT REPORT
ADOPT MITIGATION MONITORING PROGRAM COMPLIANCE REPORT
APPROVE PROJECT AND BUDGET
ADOPT, ADVERTISE, AND AWARD
SPECS. 6823; CAPITAL PROJECT NO. 69276
(FIFTH DISTRICT) (3 VOTES)**

SUBJECT

The approval of recommended actions will certify the Environmental Impact Report and adopt Mitigation Monitoring and Reporting Program; adopt plans and specifications; approve a total revised project budget of \$11,067,000; allow advertising for construction bids; and delegate authority to the Director of Public Works to award and execute a construction contract for the Stephen Sorensen County Park Gymnasium and Community Building Project.

IT IS RECOMMENDED THAT YOUR BOARD:

1. Certify that the Environmental Impact Report for the Stephen Sorensen County Park Gymnasium and Community Building Project has been completed in compliance with the California Environmental Quality Act and reflects the independent judgment and analysis of the County; find that the Board has reviewed and considered the information contained in the final Environmental Impact Report prior to approving the project; adopt the Mitigation Monitoring and Reporting Program; find that the Mitigation

"To Enrich Lives Through Effective And Caring Service"

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Intra-County Correspondence Sent Electronically Only***

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

#27 AUGUST 10, 2010

Sachi A. Hamai
SACHI A. HAMAI
EXECUTIVE OFFICER

Board of Supervisors
GLORIA MOLINA
First District

MARK RIDLEY-THOMAS
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during the project implementation; and determine that the significant adverse effects of the project have been reduced to an acceptable level as outlined in the Environmental Findings of Fact, which findings are adopted and incorporated by reference.

2. Approve a total revised project budget estimated at \$11,067,000 for the Stephen Sorensen County Park Gymnasium and Community Building Project.
3. Approve the project and adopt plans and specifications for the Stephen Sorensen County Park Gymnasium and Community Building Project at an estimated construction cost of \$7,610,000, and instruct the Executive Officer of your Board to advertise the project for construction bids to be received and opened on September 27, 2010, in accordance with the Instruction Sheet for Publishing Legal Advertisements.
4. Authorize the Director of Public Works to execute a consultant services agreement with the apparent Lowest Responsive and Responsible Bidder to prepare a baseline construction schedule for a not-to-exceed fee of \$6,100, funded by the existing project funds.
5. Delegate to the Director of Public Works the authority to determine, in accordance with the applicable contract and bid documents, whether the apparent Lowest Responsive and Responsible Bidder has timely prepared a satisfactory baseline construction schedule and satisfied all conditions for contract award, including the criteria adopted by your Board for contract award. Upon determination that all such conditions have been satisfied, authorize the Director of Public Works to award and execute the construction contract, in the form previously approved by County Counsel, to the apparent Lowest Responsive and Responsible Bidder, and to establish the effective date of the contract upon receipt by acceptable performance and payment bonds and evidence of required contractor insurance.
6. Adopt the Youth Employment Plan for Stephen Sorensen County Park Gymnasium and Community Building Project.
7. Authorize the Chief Executive Officer to execute the Memorandum of Agreement with the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation, to acquire and protect 5.4 acres of Mojave ground squirrel replacement habitat for approximately \$30,000, funded within the project budget.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of the recommended actions will certify the Final Environmental Impact Report (Final EIR); find that the recommended project is the environmentally superior alternative; approve project scope and budget; adopt plans and specifications; authorize the Department of Public Works (Public Works) to advertise for construction bids; and award a construction contract for the Stephen Sorensen County Park Gymnasium and Community Building Project located at 16801 East Avenue P in Palmdale. The adopt, advertise, and award process is being recommended in order to maintain the construction permit before its expiration and to expedite the delivery of the project.

Recommended Project

The recommended project includes construction of an approximately 14,500-square-foot gymnasium and community building that includes a multi-purpose room, classroom, lobby area, restrooms, kitchen, and storage, custodial, and utility rooms. In addition, the project includes construction of a new parking lot with a circular drop-off area, new walkways, landscaping, irrigation, and security lighting (overall, the "Proposed Project").

Environmental Impact Report

In July 2009, as required under the California Environmental Quality Act (CEQA), a Draft Environmental Impact Report (Draft EIR, see Attachment B) was prepared, which evaluated the Proposed Project, an alternative that would feasibly attain most of the project basic objective but would avoid or significantly lessen any of the significant effects of the project, and a No Project Alternative.

Alternative 1, the No Project Alternative, resulted in fewer impacts on the environment than the Proposed Project. It failed, however, to meet any of the goals and objectives of the Proposed Project. Alternative 2, the Revised Site Plan Alternative, rotated the Gymnasium/Community Building by 90 degrees, thus encroaching upon the 100-year flood zone. This alternative met all of the basic project objectives, but disturbed a larger area; required additional grading; and required raising the building foundation above the 100-year flood level, which resulted in higher engineering and construction costs. Furthermore, the alternative created additional impacts to biological and cultural resources.

Based upon this comparative analysis, the Proposed Project was deemed the "Environmentally Superior Alternative" under CEQA, as it avoids additional impact to biological resources, cultural resources, and the flood zone. The Proposed Project also meets all the programmatic goals and objectives and has been determined to be the

least expensive of the evaluated alternatives. Accordingly, the Proposed Project is being recommended for approval.

Mitigation Monitoring Program Compliance Report

A Mitigation Monitoring Program Compliance Report (MMP) has been prepared in conjunction with the EIR. Pursuant to CEQA, the MMP identifies measures that will reduce the effects from being a "Potentially Significant Impact" to a "Less Than Significant Impact," in the following areas of impact:

- *Aesthetics:* Minimization of light spillage beyond the boundaries of the park through the design and positioning of project lighting.
- *Air Quality:* Minimization of carbon emissions and dust particulate during construction through the imposition of limitations on equipment idling periods to reduce exhaust emissions, installation and use of wheel washers at site exits and covers on all hauled loads to reduce dust.
- *Biological Resources:* Protection of the habitat and nesting areas of native animal life through pre-construction site surveys for local animals and their habitats; relocation of impacted animals to similar adjoining habitats in accordance with established protocols; and if necessary, the acquisition, enhancement, and management of replacement habitat for threatened species specified under the California Endangered Species Act in accordance with protocols required by the California Department of Fish and Game.

It has been determined that the County will be required to acquire replacement habitat for the Mojave ground squirrel, which will be displaced by the Proposed Project.

- *Cultural Resources:* Protection of archaeological, paleontological, and native American artifacts from damage or disturbance through cultural resource orientations of construction personnel prior to the initiation of construction activities and ongoing monitoring of construction activities and geologic movements or disturbances.
- *Geology:* Mitigation of potential seismic impacts on the completed project through reviews of building designs and adherence to recommendations and parameters established in the geotechnical report; recommendations for the mitigation of liquefaction and expansive soils will comply with the geotechnical report and the California Building Code.

- Noise: Minimization of construction related noise through the restriction of construction activities to 7:00 a.m. to 4:00 p.m., regular inspection and maintenance of construction equipment to ensure noise mufflers are operating properly; and the placement of all construction staging areas as far away as possible from residences.
- Utilities: Minimization of utility costs through the planting of drought tolerant plant species in landscaped areas.

Project Implementation

On February 6, 2007, your Board approved the project budget of \$9,925,000 and awarded a design and consultant services agreement to Carde-Ten Architects for the project. During the course of design, the agreement was amended to include design features to achieve a United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) New Construction Version 2.2 Silver level certification. Furthermore, as part of the Fiscal Year (FY) 2008-09 Final Changes Budget, the project budget was augmented by \$1,142,000, making the total project budget \$11,067,000.

The plans and specifications for the proposed Gymnasium and Community Building Project have been completed, and we are recommending that your Board adopt and advertise these documents for construction bids.

In order to expedite construction of the project, it is recommended that your Board authorize the Director of Public Works to award and execute a construction contract to the Lowest Responsive and Responsible Bidder (as defined in the FACTS AND PROVISIONS/LEGAL REQUIREMENTS Section of this letter), if the low bid is within the approved construction costs of \$7,610,000. If the bid cannot be accommodated within the approved total project budget, a contract will not be awarded, and we will return to your Board with a revised project scope of work and/or other funding recommendations.

The proposed consultant services agreement requires the apparent Lowest Responsive and Responsible Bidder to prepare a baseline construction schedule that conforms to the County's schedule specification, which is critical to successfully manage construction activities by both the contractor and the County. Bid specifications provide that if the apparent Lowest Responsive and Responsible Bidder fails to complete an acceptable construction schedule, the Director of Public Works may return to your Board to recommend that the bidder be determined non-responsive and recommend awarding the construction contract to the next apparent Lowest Responsive and

Responsible Bidder, contingent on that bidder completing a baseline schedule that conforms to the County's specifications.

The project site supports marginal habitat for the Mojave ground squirrel, which is listed as threatened species by the California Endangered Species Act (CESA). The construction of the project at this site will cause a loss of habitat for this State-listed species. Pursuant to Section 2081 of CESA, the County will obtain a "take permit" and purchase mitigation credits by acquiring, enhancing, and managing replacement habitat for the Mojave ground squirrel.

On June 26, 1997, your Board acting as the governing body of the County of Los Angeles Regional Park and Open Space District (District), adopted the Youth Employment Policy for projects funded by the Safe Neighborhood Parks Propositions of 1992 and 1996 (Proposition A). The District requires that a Youth Employment Plan for each Proposition A funded project be adopted by the governing body of the grantee at a duly noticed public meeting. Approval of the attached Youth Employment Plan will comply with the District's policy.

The proposed project will be managed by Public Works. It is anticipated that the project will begin construction in October 2010 and be completed in March 2012.

Green Building/Sustainable Design Program

The project will support your Board's sustainable design program by incorporating into the project design and construction features to achieve a LEED New Construction Version 2.2 Silver level certification status. The project design will include features that will substantially reduce water consumption, address stormwater runoff, enhance indoor air quality, use energy efficient appliances and finishes, provide daylighting through much of the building, and allow building operators to make adjustments in building systems for thermal comfort and lighting needs.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provision of Operational Effectiveness (Goal 1), Children, Family, and Adult Well-Being (Goal 2), and Community and Municipal Services (Goal 3), by investing in public infrastructure that will enhance recreational opportunities for County residents.

FISCAL IMPACT/FINANCING

Public Works' fair construction cost estimate for the project is \$8,371,000, including \$7,610,000 for the base construction contract and \$761,000 for a change order contingency funds. The total project cost including plans and specifications, plan check, construction, change order contingency fund, consultant services, civic art allocation, miscellaneous expenditures, and County services is estimated at \$11,067,000. Sufficient appropriation is available in the FY 2010-11 Capital Project/Refurbishment Budget for Stephen Sorensen County Park Gymnasium and Community Building Project (Capital Project No. 69276) to fully fund the project. The Project Schedule and Budget Summary are detailed in Attachment A.

The proposed project is funded with \$345,000 of Community Development Block Grant; \$750,000 of Vehicle License Fee Gap Loan; \$1,500,000 of Enhanced Unincorporated Area Services Funds(Proposition 62) net County cost; \$6,900,000 Fifth District Capital Project net County cost; \$430,000 of Proposition A Excess funds, and \$1,142,000 of prior year net County cost derived from Designation for Capital Projects/Extraordinary Maintenance funds.

Operating Budget Impact

Following completion of the project, the Department of Parks and Recreation (Parks and Recreation) will maintain all new installations and structures resulting from the project. Parks and Recreation anticipates one-time operating costs of \$73,000 for gymnasium recreational and maintenance equipment/supplies, and ongoing operating costs of \$422,000 for recreation and maintenance staffing, custodial supplies, and utilities. Parks and Recreation will work with the Chief Executive Office to confirm the appropriate level funding and request the on-time and ongoing funds in its FY 2012-13 New Facilities request.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Pursuant to your Board's Civic Art Policy adopted on December 7, 2004, the Stephen Sorensen County Park Gymnasium and Community Building Project budget includes one percent of design and construction costs to be allocated to the Civic Art Fund.

Applicable law, including the State Public Contract Code, requires the County to award construction contracts to the Lowest Responsive and Responsible Bidder, which refers to the firm that: 1) submits the bid with the lowest cost; 2) is deemed by the County to be "responsive" to specific criteria under the solicitation, including, but not limited to, licensure, bonding, and insurance requirements; and 3) is determined by the County to

be a "responsible" bidder by exhibiting the quality, fitness, capacity, experience, and trustworthiness to satisfactorily perform the work required under the bid solicitation.

A standard contract, in a form previously approved by County Counsel, will be used. The construction contract will contain terms and conditions supporting your Board's ordinances, policies, and programs, including, but not limited to, County's Greater Avenues for Independence and General Relief Opportunities for Work Programs (GAIN/GROW); Board Policy No. 5.050; Contract Language to Assist in Placement of Displaced County Workers, Board Policy No. 5.110; Reporting of Improper Solicitations, Board Policy No. 5.060; Notice to Contract Employees of Newborn Abandonment Law (Safely Surrendered Baby Law), Board Policy No. 5.135; Contractor Employee Jury Service Program, Los Angeles County Code, Chapter 2.203; Notice to Employees Regarding the Federal Earned Income Credit (Federal Income Tax Law, Internal Revenue Service Notice 1015); Contractor Responsibility and Debarment, Los Angeles County Code Chapter 2.202; and the Los Angeles County's Child Support Compliance Program, Los Angeles County Code, Chapter 2.200; and the standard Board-directed clauses that provide for contract termination or renegotiation.

To ensure that the contract is awarded to the Lowest Responsive and Responsible contractor with a satisfactory history of performance, bidders are required to report violations of the False Claims Act, criminal convictions, civil litigation, defaulted contracts with the County, complaints filed with the contractor's State License Board, labor law/payroll violation, and debarment actions. As provided for in Board Policy No. 5.140, the information reported by the contractor will be considered before making a recommendation to award.

The project specifications contain provisions requiring the contractor to report solicitations of improper consideration of County employees and allowing the County to terminate the contract if it is found that the contractor offered or gave improper consideration to County employees.

The plans and specifications include the contractual provisions and material requirements necessary for this project and are on file with Public Works.

On June 26, 1997, your Board, acting as the governing body of the Regional Park and Open Space District (District), adopted a Youth Employment Policy for projects funded by the Safe Neighborhood Parks Propositions of 1992 and 1996 (Proposition A). The District requires that the governing body of the grantee adopts a Youth Employment Plan for each Proposition A funded project at a duly noticed public meeting. Approval of the attached Youth Employment Plan (Attachment C) will comply with the District's policy.

ENVIRONMENTAL DOCUMENTATION

The Environmental Impact Report (EIR) was prepared in accordance with Section 15365 of the CEQA Guidelines. Based on the findings of the EIR, specific mitigation measures are required for Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology, Noise, and Utilities. Potentially significant impacts in these environmental resource areas will be avoided or minimized to "Less Than Significant Impact" with the implementation of the specific mitigation measures identified in the attached EIR (Attachment B).

As required by the California Environmental Quality Act, the EIR was prepared and circulated for 45 days for agency and public review. Pursuant to Public Resources Code Sections 21092 and 21092.3, public notice was published in the Antelope Valley Press on July 27, 2009, and posted at various locations at the Stephen Sorensen Park. Comments were received from the California Department of Fish and Game and the Los Angeles County Department of Parks and Recreation. No comments were received from members of the public. All comments received and responses to the comments are attached in Attachment B of the EIR and sent to these agencies pursuant to Section 21092.5 of the State CEQA Guidelines.

The proposed Mitigation Monitoring Program Compliance Report (Chapter 7 of Attachment B) was prepared to ensure compliance with the environmental mitigation measures included as part of the Final EIR relative to Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology, Noise, and Utilities. The recommended measures to mitigate the environmental impacts will be incorporated as part of the project. Based on the final EIR, comments, clarifications, and revisions received, it has been determined that the project will not have a significant effect on the environment.

The project is not exempt from payment of a CEQA filing fee to the California Department of Fish and Game, pursuant to Section 711.4 of the Fish and Game Code, to defray the costs of fish and wildlife protection and management incurred by the California Department of Fish and Game. Upon your Board's adoption of the EIR, Public Works will file a Notice of Determination in accordance with Section 21152(a) of the California Public Resources Code and pay the required filing and processing fees with the Registrar-Recorder/County Clerk of approximately \$3,000.

CONTRACTING PROCESS

On February 6, 2007, your Board awarded a design and consultant services agreement to Carde-Ten Architects for a not-to-exceed fee of \$589,000.

The Honorable Board of Supervisors
August 10, 2010
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Advertising for construction bids will be in accordance with the County's standard Instruction Sheet for Publishing Legal Advertisements (Attachment D).

As requested by your Board on February 3, 1998, this contract opportunity will be listed on the Doing Business with Us website.

Participation by Community Business Enterprises (CBE) in the project is encouraged through Public Works' Capital Projects' CBE Outreach Program and by monitoring the good faith efforts of bidders to utilize CBE.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of this action will have no negative impact on current County services or projects. The park will remain fully operational during the construction of the proposed project.

CONCLUSION

Please return one adopted copy of this letter to the Chief Executive Office, Capital Projects Division; Parks and Recreation; and Public Works, Project Management Division I.

Respectfully submitted,



WILLIAM T FUJIOKA
Chief Executive Officer

WTF:GF:SK
DJT:AC:zu

Attachments

c: Executive Officer, Board of Supervisors
County Counsel
Arts Commission
Office of Affirmative Action Compliance
Parks and Recreation
Public Works

ATTACHMENT A

**DEPARTMENT OF PUBLIC WORKS:
STEPHEN SORENSEN COUNTY PARK
GYMNASIUM AND COMMUNITY BUILDING PROJECT
CERTIFY THE FINAL ENVIROMENTAL IMPACT REPORT
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ADOPT, ADVERTISE, AND AWARD
SPECS. 6823; CAPITAL PROJECT NO. 69276
(FIFTH DISTRICT) (3 VOTES)**

I. PROJECT SCHEDULE

Project Activity	Scheduled Completion Date
Award Design Contract	02/06/2007*
Schematic Design	03/28/2007*
Design Development	05/30/2007*
Construction Documents	10/29/2007*
Jurisdictional Approvals	11/19/2007*
Complete Environmental Impact Report	11/09/2009*
Board Action	08/10/2010
Construction Start	10/27/2010
Substantial Completion	03/24/2012
Final Acceptance	06/13/2012

* Actual completion date.

II. PROJECT BUDGET SUMMARY

Project Activity	Approved Project Budget	Proposed Budget
Land Acquisition	\$0	\$30,000
Construction		
Low Bid Construction Contract	\$ 6,874,850	\$ 7,610,000
Job Order Contract	0	0
Change Orders	687,485	761,000
Youth Employment	20,000	15,000
Telecomm Equip – Affixed to Building	37,500	60,000
Civic Art	74,640	83,000
Other: Utility Connection Fees	<u>75,000</u>	<u>80,000</u>
Subtotal	\$ 7,769,475	\$ 8,609,000
Programming/Development	\$ 20,804	\$ 20,804
Plans and Specifications	\$ 621,366	\$ 647,000
Consultant Services		
Geotech/Soils Report and Soils Testing	50,000	50,000
Material Testing	80,000	80,000
Cost Estimating	0	0
Topographic Surveys/Soils Engineer	0	0
Construction Management Support	0	0
Construction Administration	0	0
Environmental (MND, EIR, and Monitoring)	325,145	300,000
Other: Feasibility Study	128,269	128,269
Other: LEED Commissioning and Registration	<u>25,000</u>	<u>25,000</u>
Subtotal	\$ 583,414	\$ 583,269
Miscellaneous Expenditures	\$ 33,000	\$ 73,370
Jurisdictional Review/Plan Check/Permit	\$ 46,000	\$ 66,000

II. PROJECT BUDGET SUMMARY (continued)

Project Activity	Approved Project Budget	Proposed Budget
County Services		
Code Compliance and Quality Control Inspection	\$148,374	\$ 200,000
Design Review	55,000	15,694
Design Services	4,533	4,533
Contract Administration	71,746	60,000
Project Management	499,571	600,000
ISD ITS Communications	0	0
Project Technical Support	37,780	60,000
Office of Affirmative Action	21,666	15,000
County Counsel	0	0
Other: Consultant Contract Recovery	2,271	67,000
Other: Construction Division	10,000	7,000
Other: Design Division	0	510
Other: Land Development Division	0	3,320
Other: Waterworks and Sewer Maint.	0	4,500
Other: Environmental Programs Division	<u>0</u>	<u>0</u>
Subtotal	\$ 850,941	\$ 1,037,557
TOTAL	9,925,000	11,067,000

ATTACHMENT B

**DEPARTMENT OF PUBLIC WORKS:
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**ENVIRONMENTAL IMPACT REPORT
(See Attachment)**

ATTACHMENT C

COUNTY OF LOS ANGELES DEPARTMENT OF PARKS AND RECREATION STEPHEN SORENSEN COUNTY PARK GYMNASIUM AND COMMUNITY BUILDING PROJECT CAPITAL PROJECT NO. 69276; GRANT NO. P116-07-2121

YOUTH EMPLOYMENT PLAN

BACKGROUND (Scope of Work)

The scope of work includes constructing an approximately 14,500-square-foot gymnasium and community building; multipurpose room; classroom; lobby area; restrooms; kitchen; and storage, custodial, and utility rooms. In addition, the project includes construction of one new parking lot; and construction of various site improvements, including new walkways, security lighting, landscaping, and irrigation.

Tasks that may be performed by At-Risk Youth

Youth will assist with landscaping and irrigation of the project. Youth will also assist in maintenance of the project site after the completion of the project.

Estimated Cost of Youth Employment

The Department of Parks Recreation (Parks and Recreation) youth employment budget for this project is \$15,000.

Method of Youth Employment

Parks and Recreation employs youth to work in various areas of Parks and Recreation through its Youth Enhancing Parks Program. This program allows youth to work on projects based on their training, experience, and physical class. In addition, Parks and Recreation requires contractors to make a good faith effort to employ at-risk youth from the community in which the project is being carried out, in compliance with the County's definition of "at-risk youth." Parks and Recreation also has contracts with local conservation corps groups to perform as-needed services suitable for youth.

Youth Employment Goal

Under the provisions of Los Angeles County Regional Park and Open Space District's policy on employment of youth, the Youth Employment Minimum Obligation of the County of Los Angeles in the amount of \$15,739,750 has been met.

ATTACHMENT D

**DEPARTMENT OF PUBLIC WORKS:
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PUBLISHING LEGAL ADVERTISEMENTS: In accordance with the State of California Public Contract Code Section 20125, you may publish once a week for 2 weeks in a weekly newspaper or ten times in a daily newspaper. Forward three reprints of this advertisement to Architectural Engineering Division, Department of Public Works, 900 South Fremont Avenue, 8th Floor, Alhambra, California 91803-1331.

**OFFICIAL NOTICE
INVITING BIDS**

Notice is hereby given that the Director of Public Works will receive sealed bids for furnishing all materials, labor, and equipment required to complete construction for the following work:

<u>SD</u>	<u>SPECS</u>	<u>PROJECT</u>	<u>BID DOC FEE</u>	<u>DATE OF BID OPENING</u>
5	6823	Stephen Sorensen Gymnasium and Community Bldg. 16801 East Ave P Lake Los Angeles, CA 93591	\$75	September 27, 2010

Copies of the project manual and drawings may be obtained at the Cashier's office, Department of Public Works, 900 South Fremont Avenue, Mezzanine, Alhambra, California 91803, for the fee stated above. For bid information, please contact Ms. Ivonne Pena of Architectural Engineering Division at (626) 458-2585. Each bid shall be submitted on the required form, sealed, and filed at the Cashier's office no later than 10:45 a.m. on the date indicated. Bids will be publicly opened, examined, and declared by the Department of Public Works at 11 a.m. on this date in the Main Conference Room, 5th Floor, at 900 South Fremont Avenue, Alhambra, California 91803.

This project requires the general contractor firm to possess a B license classification at the time of award. The general contractor firm shall have completed at least one vertical construction project for public sector clients within the last 5 years.

In addition to the above, the general contractor firm must satisfy at least one of the following two requirements:

OPTION 1

The general contractor firm shall have completed a minimum of one Gymnasium and Community Building project or similar in California in the last 5 years, where the value of work was in excess of \$6 million. Or

OPTION 2

The general contractor firm shall have completed, within the last 5 years, at least one project for a public entity at a construction value of at least \$6 million and a total square footage of at least 11,000 square feet, which included at least three of the following five construction elements: low voltage systems, interior acoustical treatment, photovoltaic panel system, onsite wastewater treatment system, and extensive earthwork and grading.

The general contractor firm shall submit verification and justification that its experience meets the County's stated construction element criteria on the County provided form. The general contractor firm may, at its discretion, submit photographs, building plans, etc., to support his examples of required construction element criteria.

For both options, the County will determine, in its sole discretion, whether or not the information provided meets the requirements for experience in order for the general contractor firm to be considered a responsive bidder on this Stephen Sorensen Gymnasium and Community Building project.

OTHER INSTRUCTIONS

The County supports and encourages equal opportunity contracting. The contractor shall make good faith efforts as defined in Section 2000 of the Public Contract Code relating to contracting with Community Business Enterprises.

The Board of Supervisors reserves the right to reject any or all bids or to waive technical or inconsequential errors and discrepancies in bids submitted in the public's interest.

Si necesita información en español, por favor llame al Telefono (626) 458-2563.



Upon 72 hours notice, the Department of Public Works can provide program information and publications in alternate formats or make other accommodations for people with disabilities. In addition, program documents are available at the Department of Public Works' main office in Alhambra (900 South Fremont Avenue), which is accessible to individuals with disabilities. To request accommodations ONLY or for more Americans with Disabilities Act (ADA) information, please contact the Department of Public Works' ADA Coordinator at (626) 458-4081 or TDD (626) 282-7829, Monday through Thursday, from 7 a.m. to 5:30 p.m.



Con 72 horas de notificación, el Departamento de Obras Públicas puede proveerle información y publicaciones sobre el programa y formatos alternativos o hacer adaptaciones para personas con incapacidades. Además, documentación sobre el programa está disponible en la oficina principal del Departamento de Obras Públicas localizada en Alhambra (900 South Fremont Avenue), la cual es accesible para personas con incapacidades. Solamente si necesita solicitar adaptaciones o para mas información del ADA, póngase en contacto con nuestro Coordinador del ADA al (626) 458-4081 o TDD (626) 282-7829, de lunes a jueves de las 7 a.m. a 5:30 p.m.

By order of the Board of Supervisors of the County of Los Angeles, State of California, dated August 10, 2010.

Specs. 6823

SACHI A. HAMAI, EXECUTIVE OFFICER
OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF LOS ANGELES

OFF-SITE REPLACEMENT HABITAT IMPLEMENTATION AGREEMENT

THIS AGREEMENT is made and entered into as of the 20TH day of MARCH, 2010, by and between the Proponent identified below and the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation, ("DTPC"), hereafter referred to collectively as the "Parties." For and in consideration of the mutual covenants and conditions contained herein, the Parties hereto do hereby agree as follows:

1. Proponent:

COUNTY OF LOS ANGELES
Chief Executive Office
Attn: Jan Takata
500 West Temple Street, Suite 754
Los Angeles, CA 90012

2. Listed Species: The following species are covered by this Agreement, only if checked:

- ☒ The Mohave Ground Squirrel (*Spermophilus mohavensis*) is a species listed as "threatened" under the California Endangered Species Act
- ☐ The burrowing owl (*Athene cunicularia*) a California state species of concern
- ☒ The desert tortoise (*Gopherus agassizii*) a species listed as "threatened" under the California Endangered Species Act and the federal Endangered Species Act.

3. Other Protected Habitat: NONE

- ☐ Streambed and/or desert wash habitat

Proponent Funding of Escrow Account. Proponent shall, within fifteen (15) days of execution of this Implementation Agreement by both Parties, deposit the following amount into an escrow account managed by First American Title Company, Inc "Escrow Holder": \$30,000. Payment must be made by check payable to "**First American Title Company.**" and mailed to:

FIRST AMERICAN TITLE COMPANY
Attn: Terry Springstead, Escrow Officer
634 S. China Lake Ste. G
Ridgecrest, Ca. 93555
T 760.375.4790
C 800.750.9330
F 866.370.0814

4. **California and Federal Requirements / Project Description of Project Site:**

Project Location:

Stephen Sorensen County Park is located in the unincorporated community of Lake Los Angeles in northern Los Angeles County, California. The Assessor's Parcel Number for the project site is 3073-001-902. The 100-acre park site is located at 16801 East Avenue P, approximately 15 miles east of Palmdale.

Project Description:

Proponent is planning to construct a Gymnasium / Community Building improvements located to the west of the existing park development and to the northwest of the existing 94-space parking lot. The project site is approximately 3.0 acres. Project features consist of an approximately 14,500 square-foot gymnasium with an attached community building and an approximately 28,750 square feet parking lot with 57 parking spaces, including three handicapped spaces.

Impacts to Protected Habitat:

The construction will result in permanent impacts to 3.0 acres of Mohave ground squirrel habitat and may result in the incidental take of individual desert tortoise. Presence / absence surveys were conducted for desert tortoise and no burrows, sign, or desert tortoises were found on the project site. However, because the replacement habitat to be acquired, enhanced, and managed under this Implementation Agreement does benefit both the Mohave ground squirrel and the desert tortoise, any habitat acquired under this Agreement shall benefit both species.

5. **Permitting Agency(ies):** The California Department of Fish and Game (CDFG) has determined that Proponent must provide compensation habitat for the Protected Habitat as follows:

Permit No. / Habitat Type	Project Impacts / Acres	Replacement Habitat Required / Acres
CDFG Incidental Take Permit 2081- - - -	3.0 (2:1 ratio)	6.0
Total		6.0

6. **Entire Agreement:** This Agreement supersedes any and all other agreements, either oral or in writing among the Parties hereto with respect to the subject matter hereof and contains all of the covenants and agreements among them with respect to said matters, and each Party acknowledges that no representation, inducement, promise, or agreement, oral or otherwise, has been made that is not embodied herein. The General Terms and Conditions (Rev. January 1, 2009) are appended hereto and incorporated into this Agreement by reference.

IN WITNESS WHEREOF, THE PARTIES HERETO have executed this Implementation Agreement :

DESERT TORTOISE PRESERVE COMMITTEE, INC.
A California Public Benefit Corporation

BY:

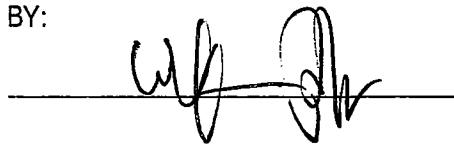
 _____

DATE:

20 MAR 10

PROPONENT:

BY:

 _____

DATE:

GENERAL TERMS AND CONDITIONS (Rev. January 1, 2009)

A. TIMEFRAME FOR PERFORMANCE

1. **Effective Date:** This Agreement shall become effective on the date that all Parties execute this Implementation Agreement and upon Proponent's deposit of stipulated fees and shall remain in full force and effect until full satisfaction of each of the Agreement's terms and conditions. Notwithstanding the foregoing, the DTPC's duties under this Agreement to identify, acquire, enhance, and manage habitat shall commence upon full funding under this Agreement.
2. **Continuing Duty to Perform:** The Parties agree and recognize that once Listed Species and/or Protected Habitat are incidentally taken and habitat modified within the Project Site, the take and habitat modification will be permanent. The Parties, therefore, agree that the acquisition, enhancement and management of the habitat by DTPC, as agent for Proponent, shall likewise be permanent and the duty to manage the replacement habitat shall be required into perpetuity.
3. **Deadline of Acquisition of Replacement Habitat:** DTPC shall within **365** days from the receipt of funding of this Implementation Agreement, acquire fee title to replacement habitat within the federally-designated Desert Tortoise Research and Natural Area (DTRNA), or within the DTRNA Expansion Area as defined by the DTPC, or in other areas acceptable to the Permitting Agency(ies) as compensation for the loss of habitat comprising the Project Site. Proponent acknowledges and agrees that the DTPC acquires replacement habitat from willing-sellers and, as such, there may be a delay in acquiring the required habitat due to the scarcity of qualified land. To the extent that the Permitting Agency(ies) agree, the DTPC's deadline for acquisition of replacement habitat shall be extended until such time that the DTPC identifies and acquires all of the replacement habitat required under this Agreement.
4. **Termination:** Either party may terminate this Agreement in writing. Upon termination, any unused funds deposited by Proponent shall be immediately returned to Proponent and the DTPC shall thereafter be discharged from performing any un-performed duty under this Agreement. However, if, prior to the termination of this Agreement the DTPC acquires all or part of the required replacement habitat, the DTPC shall be entitled to a pro-rata share of the acquisition, enhancement, and management funds stipulated for each acre or portion thereof of replacement habitat actually acquired.

B. PURPOSES

The purposes of this Agreement are:

1. To assure that any take of the Listed Species occurring within the Project Site will be incidental; that the impacts of the take will, to the maximum extent practicable, be minimized and mitigated; that adequate funding for the Permit(s) will be provided; and that the take will not appreciably reduce the likelihood of the survival and recovery of the Listed Species and/or Protected Habitat in the wild.
2. To memorialize a cooperative program by state and federal agencies and private interests to conserve the Listed Species and/or Protected Habitat. It is understood and agreed between the Parties, that the DTPC, in performing all of the activities delegated to it under this Agreement, is acting as the authorized agent for Proponent for the limited purposes of acquiring and managing replacement habitat, and for no other purpose unless expressly stated herein.

3. To assure the implementation of Proponent's Permit(s) by providing for the acquisition and short-term enhancement and long-term management of replacement habitat for the Listed Species and/or Protected Habitat.
4. To contractually bind each Party to fulfill and faithfully perform the obligations, responsibilities, and tasks assigned to it pursuant to the terms of this Agreement.
5. To provide remedies and recourse should any Party fail to perform its obligations, responsibilities, and tasks as set forth in this Agreement.

C. MANAGEMENT OF FUNDING

1. **Acquisition Fund:** Funds for the acquisition of replacement habitat will be released by Escrow Holder to pay for the purchase price, outstanding taxes and other liens and encumbrances, escrow fees, title fees, property analyses, surveys and assessments, and documentary and recording fees of replacement habitat identified by DTPC and approved by CDFG. DTPC shall, prior to requesting a release of funds, submit to CDFG for approval a "Proposed Lands for Acquisition Form" ("PLFAF"), an Estimated Closing Statement, a Preliminary Title Report, and Conservation Easement Deed or Restrictive Covenant to the permitting agencies for approval. Upon Escrow Holder's receipt of written approval of the above-described documents, Escrow Holder shall close escrow and release the acquisition funds as described. DTPC shall be permitted to offer a Conservation Easement or Restrictive Covenant interest in any qualified Mohave ground squirrel habitat or habitat lands within the Desert Tortoise Research and Natural Area and DTRNA Expansion Area that it has previously acquired to satisfy part or all of its acquisition duties; provided that such habitat has not already been allocated or credited under any other mitigation/compensation agreements. In the event that there exist excess funds in the Acquisition Fund after all of the replacement habitat have been acquired ("Surplus Funds"), Proponent shall authorize such Surplus Funds to be allocated to the Enhancement Fund. Of the total mitigation fees due to the DTPC, the DTPC has assessed \$4,067.70 per acre for habitat acquisition.
2. **Enhancement Fund:** Funds for the enhancement of the replacement habitat, in addition to any Surplus Funds not expended under the Acquisition Fund, will be released by Escrow Holder upon satisfactory evidence that DTPC has acquired the required replacement habitat. The DTPC shall designate such funds under its own accounts for expenses related to the short-term enhancement of the replacement habitat. Of the total mitigation fees due to the DTPC, the DTPC has assessed \$253.38 per acre for habitat enhancement expenses.
3. **Management Fund:** Funds for the long-term management of the replacement habitat will be released by Escrow Holder upon satisfactory evidence that DTPC has acquired the required replacement habitat. Of the total mitigation fees due to the DTPC, the DTPC has assessed \$678.92 per acre for perpetual management of replacement habitat.
4. **CDFG Fees:** Proponent shall be solely responsible for payment of reasonable expenses charged by CDFG, if applicable, for review of title and other documentation related to the transfer of compensation lands to CDFG.
5. **DTPC Management of Mitigation Fees:** DTPC shall establish a special project account with an appropriate financial institution to manage any funds remitted to it. The Enhancement Fund shall be maintained in a temporarily restricted account until fully expended. The Management Fund shall be maintained in a restricted account which shall preserve principal in perpetuity and the interest and/or dividend income therefrom shall be used by the DTPC for on-going management activities in perpetuity.

C. COVENANT TO COOPERATE

1. The Parties shall, prior to undertaking any activities that are inconsistent with or materially differ from the terms and conditions of the respective Permit(s), consult with and obtain the approval of the permitting agencies.
2. DTPC shall provide a report to Proponent and the permitting agencies on or before the 365th day from the execution date of this Implementation Agreement, and from time to time upon request by the permitting agencies or Proponent, that accounts for any expenditures of the funds received and activities performed under this Agreement.

D. REMEDIES AND ENFORCEMENT

1. **Land Owner's Liability:** DTPC shall retain whatever liability it possesses as an owner of interests in land. Prior to acquisition of subject property, DTPC shall perform due diligence assessments for hazardous materials and other hazards affecting the property.
2. **Injunctive and Temporary Relief:** The Parties acknowledge that injunctive and temporary relief may be appropriate in certain instances involving a breach of this Agreement.
3. **Indemnification:** Each of the Parties indemnifies, , holds harmless, and defends, the other Party and the other Party's officers, officials, employees and agents from and against any and all damages, demands, claims, complaints and causes of action arising and/or resulting from its 's or its officers', employees' or agents' negligence or willful misconduct in its performance of this Agreement.
4. **Limit on Damages:** In case of a breach of this Agreement by DTPC, the DTPC shall only be liable for the payment of fees assessed by the Permitting Agency(ies) arising from non-compliance under the Permit(s). The Parties agree that non-performance or breach of this Agreement shall not result in consequential or other damages.
5. **Binding Arbitration:** The Parties agree that the Parties will endeavor to settle any and all claims arising from this Agreement by non-binding mediation in the County of Los Angeles, California. Each party shall be responsible for one-half of the fees and costs taxed by the mediation.

E. MISCELLANEOUS PROVISIONS

1. **Amendments to the Implementation Agreement:** Except as otherwise set forth herein, this Agreement may be amended only by written agreement signed by each of the Parties hereto.
2. **Amendments to the Permit(s):** Proponent shall immediately notify DTPC of any material changes to the Permit(s) agreed to by and between Proponent and permitting agencies; and the Parties agree that this Agreement shall be amended or modified in accordance with such changes in Proponent's permit.
3. **No Partnership.** Except as otherwise expressly set forth herein, neither this Agreement nor the Permit(s) shall make or be deemed to make any Party to this Agreement the agent for or the partner of any other Party.
4. **Binding Effect:** This Agreement and each of its covenants and conditions shall be binding on and shall benefit the Parties hereto and their respective successors and assigns.

5. **Attorney's Fees and Costs.** Except as otherwise provided in this Agreement, if any action at law or equity, including any action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, each Party to the litigation shall bear its own attorney's fees and costs provided that attorney's fees and costs recoverable against the State of California shall be governed by applicable law.
6. **Elected Officials Not to Benefit:** No member of the Legislature of the State of California or member of or delegate to Congress shall be entitled to any share or part of this Agreement, or to any benefit that may arise from it.
7. **Notices:** Any notice permitted or required by this Agreement shall be deemed delivered to the Parties given five (5) days after deposit in the United States mail, certified and postage prepaid, return receipt requested, and addressed as follows or at such other address as any Party may from time to time specify to the other Parties in writing:

PROPONENT

To Address(es) cited in the first page of this Agreement.

With a copy to:

Los Angeles County
County Counsel
Attn: Rober Cartwright
500 West Temple Street, Room 651
Los Angeles, CA 90012

Los Angeles County Department of Public Works
Project Management Division I
Attn: Alioune Dioum
900 South Fremont Avenue, 5th Floor
Alhambra, CA 91803

Los Angeles County Department of Parks and Recreation
Attn: Joan Rupert
510 South Vermont Avenue, Room 201
Los Angeles, CA 90020

DTPC

DESERT TORTOISE PRESERVE COMMITTEE, INC.
President of the Board
4067 Mission Inn Avenue
Riverside, CA 92501

With a copy to:

Jun Y. Lee
3701 Wilshire Boulevard, Suite 1105
Los Angeles, CA 90010

TEL (213)300-5220
FAX (213)607-3105
JUNYLEE@GMAIL.COM

CALIFORNIA DEPARTMENT OF FISH AND GAME

Addressed to the regional office representatives checked below:

[] CDFG REGION 4 – CENTRAL REGION

(Serving Fresno, Kern, Kings, Madera, Mariposa, Merced, Monterey, San Benito, San Luis Obispo, Stanislaus, Tulare and Tuolumne counties)

Regional Manager
Bill Loudermilk
1234 E. Shaw Avenue
Fresno, CA 93710

[] CDFG REGION 5 – SOUTH COAST

(Serving Los Angeles, Orange, San Diego, Santa Barbara and Ventura counties)

[] For 1600 Streambed Alteration Agreements -

Jamie Jackson
P.O. Box 92890
Pasadena, CA 91109

or

[X] For 2081 Incidental Take Permits –

Scott Harris
California Department of Fish and Game
1508 North Harding Avenue
Pasadena, CA 91104

Acting Regional Manager:
Kevin Hunting
4949 Viewridge Avenue
San Diego, CA 92123

[x] CDFG REGION 6 – INLAND DESERTS

(Serving Imperial, Inyo, Mono, Riverside and San Bernardino counties)

Tonya Moore, Environmental Scientist
California Department of Fish and Game
12550 Jacaranda Avenue
Victorville CA 92395

[] For 1600 Streambed Alteration Agreements (Inland Deserts Region)

Jim Sheridan
Environmental Scientist
California Department of Fish and Game, Inland Deserts Region
78078 Country Club Drive, Suite 109
Bermuda Dunes, CA 92203

Regional Manager
Curt Taucher,
Los Alamitos Administrative Office
4665 Lampson Avenue, Suite J
Los Alamitos, CA 90720

All notices to CDFG shall be served with a copy to:

General Counsel
Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

Habitat Conservation Planning Branch
1416 Ninth Street, Suite 1260
Sacramento, CA 95814

STEPHEN SORENSEN COUNTY PARK, GYMNASIUM/ COMMUNITY BUILDING PROJECT

Final Environmental Impact Report/
Environmental Assessment

Prepared for
County of Los Angeles
Department of Public Works

November 2009



Notice of Determination

Appendix D

TO:

☒ Office of Planning and Research
For U.S. Mail: *Street Address:*
P.O. Box 3044 1400 Tenth Street
Sacramento, CA 95812-3044 Sacramento, CA 95814

☒ County Clerk
County of: LA County Registrar/County Clerk
Address: 12400 E. Imperial Hwy., Room 2001
Norwalk, CA 90650

FROM:

Public Agency: County of Los Angeles
Department of Public Works
Address: 900 S. Fremont Avenue, 5th Floor
Alhambra, CA : 91803-1331
Contact: Alioune Dioum, PE
Phone: (626) 300-2357
Lead Agency (if different from above):

Address:

Contact:
Phone:

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2008061091

Project Title: Stephen Sorensen County Park New Gymnasium and Community Building Project

Project Location (include county): cross streets: East Avenue P and 170th Street East, Los Angeles County

Project Description: The County of Los Angeles is proposing Gymnasium/Community Building park improvements on approximately 3.0 acres of land within the 100-acre Stephen Sorensen County Park, located at 16801 East Avenue P, in the unincorporated community of Lake Los Angeles, in northern Los Angeles County, California, approximately 15 miles east of the City of Palmdale. Improvements consist of a combined gymnasium and community building (with a multi-purpose room and a classroom), an expanded parking lot area with 57 new parking spaces, landscaping, irrigation and security lighting.

Previous park improvements that have been constructed to date: 1) a three-acre development that included a children's playground with sand and playground equipment, men's and women's restrooms, and picnic tables in the central-southern portion of the park, and 2) a 12 acre expansion in the southwestern portion of the park, just east of the currently proposed Gymnasium/Community Building improvements, which included lighted basketball courts, baseball diamonds with bleachers, soccer fields, security lighting, landscaping and irrigation, walkways and additional parking.

This is to advise that the County of Los Angeles has approved the above described project on
(☒ Lead Agency or ☐ Responsible Agency)

and has made the following determinations regarding the above described projects.
(Date)

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to the General Public at:

Los Angeles County Department of Public Works, 900 S. Fremont Avenue, Alhambra, California 91803-1331 (Attn: Alioune Dioum), Lake Los Angeles Library, 16921 E. Ave. O., Suite A, Palmdale, CA 93591 (Attn. Mary Mactaggart), Lancaster Regional Library 601 W. Lancaster Blvd., Lancaster, CA 93534, and the Littlerock Library, 35119 80th Street East, Littlerock, CA 93543.

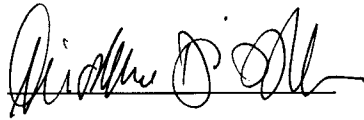
Signature (Public Agency) _____ Title: Project Manager

Date: _____ Date Received filing at OPR: _____

Copies of the Environmental Assessment (EA) are available for public review at the County of Los Angeles Department of Public Works, Alhambra, CA Lake Los Angeles Library, 16921 E. Ave. O., Suite A, Palmdale, CA 93591, Lancaster Regional Library 601 W. Lancaster Blvd., Lancaster, CA 93534, and the Littlerock Library, 35119 80th Street East, Littlerock, CA 93543.. Direct any questions or requests for single copies of the EA to:

Name/Title: Alioune Dioum, Project Manager
Address/Tel: County of Los Angeles, Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91809
(626) 300-2357

Signature:

A handwritten signature in black ink, appearing to read 'Alioune Dioum', written over a horizontal line.

Date: 10/27/09

STEPHEN SORENSEN COUNTY PARK, GYMNASIUM/ COMMUNITY BUILDING PROJECT

Final Environmental Impact Report/
Environmental Assessment

Prepared for
County of Los Angeles
Department of Public Works

November 2009

21650 Oxnard St.
Suite 1680
Woodland Hills, CA 91367
818.703.8600
www.esassoc.com

Los Angeles

Oakland

Olympia

Petaluma

Portland

Sacramento

San Francisco

San Diego

Seattle

Tampa

205237.01



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CHAPTER 1

Introduction

This joint Final Environmental Impact Report (Final EIR)/Environmental Assessment (EA) has been prepared to evaluate environmental impacts that might result from the development and operation of the proposed Stephen Sorensen County Park, Gymnasium/Community Building Project. The Final EIR, which consists of both the Draft EIR and the responses to comments contained herein, is intended to serve as an informational document to be considered by the County of Los Angeles and the responsible agencies during deliberations on the proposed project to evaluate the project's impact on the environment.

As further described below in Section 1.2, this Final EIR document consists of this Introduction, a Final Executive Summary, Response to Comments received on the Draft EIR, Revisions to the Draft EIR and the Mitigation Monitoring and Reporting Program (MMRP). The Draft EIR is hereby incorporated by reference.

1.1 Purpose and Legal Authority

This Final EIR has been prepared in conformance with State of California and County of Los Angeles for the implementation of the California Environmental Quality Act (CEQA).¹

In accordance with *CEQA Guidelines* Section 15121(a), the purpose of an EIR is to serve as an informational document for use by decision makers and the public in their review of the potential impacts of a proposed project, as well as in the evaluation of alternatives and mitigation measures which may minimize, avoid, or eliminate those impacts. *CEQA Guidelines* Section 15151 contains the following standards for EIR adequacy:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

¹ CEQA Statute, Public Resources Code (PRC) Division 13, Chapter 1, §21000 et al., 2007; CEQA Guidelines, California Code of Regulations (CCR), Title 14, Chapter 3, §15378, 2007.

As the public agency with the authority to approve or deny the proposed project, the County of Los Angeles Department of Public Works (LACDPW or County), which is the Lead Agency, will consider the information in the EIR along with other information in the public record before taking any action on the proposed project. The conclusions of the EIR regarding environmental impacts do not control the LACDPW discretion to approve, deny or modify the proposed project, but instead are presented as information intended to aid the decision-making process.

This document also includes National Environmental Policy Act (NEPA) compliance, in the form of an EA (Section 3.14 of the Draft EIR), because federal agencies often require a NEPA review when federal funds are utilized. With regard to the construction and operation of the proposed Stephen Sorensen County Park, Gymnasium/ Community Building Project, federal funds are being provided by the US Department of Housing and Community Development (HUD), administered through a grant to the Community Development Commission of the County of Los Angeles (CDC). These funds are currently being provided for design phase activities, but may additionally be applied towards construction costs.

From the standpoint of NEPA, a project with federal agency involvement that may have significant unavoidable impacts on the environment would require analysis in an Environmental Impact Statement (EIS), the approximate equivalent of an EIR under CEQA. Where mitigation measures are deemed to reduce project impacts to below a significant level, an EA would suffice. An EA under NEPA is roughly equivalent to an MND under CEQA. The EA is provided in Section 3.14 NEPA Environmental Assessment of the Draft EIR; it addresses additional issues, including social justice. The US Department of Housing and Urban Development (HUD) is Lead Agency for the EA and project federal funding.

1.2 The CEQA Process

On July 24, 2009, as required by CEQA and the *CEQA Guidelines*, LACDPW released its Draft EIR on the proposed Stephen Sorensen County Park, Gymnasium/Community Building Project (State Clearinghouse No. 2008061091) for public review. With the release of the Draft EIR, the required 45-day review and comment period on the Draft EIR began; the comment period subsequently closed on September 8, 2009. The Notice of Availability (NOA) of the Draft EIR was sent to 37 individuals and/or agencies including the State of California, Office of Planning and Research (State Clearinghouse). The Draft EIR was available for review at the Lake Los Angeles Library, the Lancaster Regional Library and the Littlerock Library. Three comment letters were received on the Draft EIR. All letters were from state or local agencies.

The Final EIR will be circulated to all public agencies that commented on the Draft EIR, as well as to those who have requested a copy of the Final EIR. (No individuals commented on the Draft EIR.) The Final EIR will circulate for a minimum of ten days before project review and consideration by the Board of Supervisors. Copies will be made available at the Los Angeles County Department of Public Works, Project Management Division I – 5th Floor, 900 S. Fremont Avenue Alhambra, California 91803-1331. In addition, a public hearing will be held at a date and

time to be determined. Certification of the Final EIR by the County must occur prior to project approval or consideration of project approval.

1.3 Final EIR Content

The Final EIR is an informational document prepared by the Lead Agency that must be considered by the County of Los Angeles before approving or denying the proposed project. Section 15132 of the *CEQA Guidelines* states that the Final EIR must consist of:

- (a) The Draft EIR or a revision of the draft.
- (b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
- (c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
- (d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- (e) Any other information added by the Lead Agency.

This Final EIR incorporates comments from public agencies and the general public, and contains appropriate responses by the Lead Agency to those comments. This Final EIR has been prepared pursuant to the provisions of CEQA and the *CEQA Guidelines*.

The Final EIR for the Stephen Sorensen County Park, Gymnasium/Community Building Project consists of the previously published Draft EIR (July 2009) under separate cover, and the following Chapters:

Chapter 1, Introduction: Describes the purpose and authority, content, process and conclusions of the Final EIR.

Chapter 2, Final Executive Summary: Provides a finalized summary of the EIR.

Chapter 3, Revisions to the Draft EIR: This chapter contains text changes to the EIR initiated by LACDPW staff and those resulting from comments on the Draft EIR, as well as errata to the Draft EIR.

Chapter 4, Response to Comments: This chapter includes all comment letters received on the Draft EIR, followed by responses to each comment therein. Each letter is given a number (such as “Comment Letter 1”) and each comment is labeled with a number in the margin. The response to each comment letter is presented immediately after the comment letter (such as “Response to Comment Letter 1”).

Chapter 5, Mitigation Monitoring and Reporting Program: Contains the project mitigation, and details the monitoring phase and action, review agency, enforcement action and responsible agency, action indicating compliance, and a verification of compliance column to be used to report compliance.

1.4 Final EIR Conclusions

As this Final EIR demonstrates, no changes to the environmental conclusions are required as a result of the comments received on the Draft EIR. No new significant effects or substantially more severe significant effects, pursuant to *CEQA Guidelines* Section 15162, have been identified by the comments. Changes to the language of some mitigation measures have been incorporated, pursuant to the request of the relevant commenting agency.

CHAPTER 2

Executive Summary

This Final EIR/EA has been prepared to evaluate environmental impacts that might result from the development and operation of the Stephen Sorensen County Park, Gymnasium/Community Building Project. The County of Los Angeles, as the Lead Agency, has the authority for preparation of this EIR and, after the comment/response process, certification of the Final EIR and approval of the proposed project. HUD is Lead Agency for the EA and project federal funding. These funds are currently being provided for design phase activities, but may additionally be applied towards construction costs. The EA was incorporated as part of the Draft EIR in Section 3.14, NEPA Environmental Assessment. The County and responsible agencies have the authority to make decisions on discretionary actions relating to the development of the proposed project.

The Final EIR was prepared in conformance with state requirements under the California Environmental Quality Act (CEQA).¹ In accordance with *CEQA Guidelines* Section 15121(a), the purpose of an EIR is to serve as an informational document for use by decision makers and the public in their review of the potential impacts of a proposed project, as well as in the evaluation of alternatives and mitigation measures which may minimize, avoid, or eliminate those impacts.

This section provides an overview of the proposed project and its objectives, and summarizes the potential impacts anticipated as a result of project implementation. The summary included later in this section identifies these impacts and lists the mitigation measures recommended to reduce any significant adverse impacts. Alternatives to the proposed project are also briefly described. For a full description of the proposed project, its impacts and alternatives, the reader is referred to Chapters 2, 3 and 5 of the Draft EIR (separate document). Other required CEQA considerations, such as growth inducing impacts, are discussed in Chapter 4 of the Draft EIR (separate document).

2.1 Project Characteristics

The project involves the construction a Gymnasium/Community Building park improvements on approximately 3.0 acres of land within the 100-acre Stephen Sorensen County Park, located at 16801 East Avenue P, in the unincorporated community of Lake Los Angeles, in northern Los Angeles County.

¹ CEQA Statute, Public Resources Code (PRC) Division 13, Chapter 1, §21000 et al., 2007; CEQA Guidelines, California Code of Regulations (CCR), Title 14, Chapter 3, §15378, 2007.

Project features consist of a gymnasium with an attached community building (approximately 14,500 square-foot) that will integrate sustainable green design features, and an approximately 28,750 square foot parking lot with 57 parking spaces, including three handicapped spaces. The Gymnasium/Community Building consists of a lobby, two staff offices, men's and women's restrooms, three-tier bleachers along with a scoreboard for the gym, a classroom with computer lab capabilities and a full kitchen. The County is planning on obtaining the United States Green Building Council's Silver certification under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. All building amenities will meet the standards of the Americans with Disabilities Act (ADA).

Access to the proposed Gymnasium/Community Building Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. Ninety-four (94) existing parking spaces are located south and southeast of the proposed park project site. The proposed project includes the addition of fifty seven (57) parking spaces, for a total of one hundred fifty one (151) parking spaces provided on-site.

2.2 Project Objectives

The objectives for the project include the following:

- Expand an existing park and fully meet Americans with Disabilities Act (ADA) requirements for buildings, including restroom facilities, walkways, and a parking lot;
- Provide a quality, up-to-date recreational facility that meets the growing demands of the surrounding community;
- Respond to the need for expanded and enhanced community recreational amenities;
- Maintain and enhance open space and recreational opportunities within the County of Los Angeles; and
- Provide a Community Building/Gym in a public location that provides both passive and active seasonal recreational sports, including basketball and indoor activities.

2.3 Environmental Impacts and Mitigation Measures

The potential environmental impacts of the proposed project are summarized in **Table 2-1** at the end of this chapter. Table 2-1 below has been revised in accordance with the changes made in the text and mitigation measures of the Final EIR. This table lists impacts in three major categories: (1) significant impacts that would remain significant even with mitigation; (2) significant impacts that could be mitigated to a level of less-than-significant; and (3) impacts that would not be significant. For each significant impact, the table includes a summary of the mitigation measure(s) and an indication of whether the impact would be reduced to a less-than-significant level by the mitigation measures.

2.4 Alternatives

CEQA requires that “an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project...” (*CEQA Guidelines*, Section 15126.6 (a)). The discussion must focus on alternatives to the project or its location which are capable of lessening significant impacts, even if these alternatives would impede to some degree the attainment of project objectives, or be more costly (Section 15126.6 (b)). The EIR is required to briefly describe the rationale for selecting the alternatives to be discussed and also identify any alternatives that were considered by the Lead Agency, but rejected as infeasible during the scoping process. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects (*CEQA Guidelines*, Section 15126.6(c)). Two alternatives were eliminated from further consideration in the Draft EIR: an Alternative Site Location alternative and an Alternative Land Use. Please see Chapter 5 of the Draft EIR for additional details (separate cover). The alternatives consist of the following:

Alternative 1: No Project Alternative

The *CEQA Guidelines* (Section 15126.6(e)(3)(B)) provides the following guidance on the No Project Alternative, “If the project is...a development project on identifiable property, the no project alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved.” The No Project Alternative² would not meet any of the project objectives. The No Project Alternative would not provide the County with expanded recreational facilities and amenities. The project site would remain limited by its existing uses, and would not allow for any growth to meet the park’s recreational goals, as expressed in the project objectives. In general, the No Project Alternative would result in fewer impacts on the environment than the proposed project; however, this alternative would not meet any of the goals and objectives of the proposed project.

Alternative 2: Revised Site Plan Alternative

Alternative 2 would provide an alternative site plan. This Alternative was chosen based upon the 2006 Planning Study conducted for the entire 100-acre park site. The purpose of the Planning Study was to identify potential land use constraints and determine the most suitable land for development. The Planning Study was intended to assist the County of Los Angeles, Department of Public Works staff with the future planning at the site. The analysis assessed the following resources: biological resources, cultural resources, geologic hazards, hazardous materials, hydrology, land use, the local transportation network, and utilities (including septic leach field capacity). This Planning Study assessed the feasibility, constraints, and opportunities for the future full development of the entire 100-acre Stephen Sorensen County Park. Based on the

² The No Project Alternative also includes the No Project/ No Build Alternative where the land would remain in its present condition and no development would occur.

results of the study, it was determined that the majority of the site contained high constraints for development (i.e., was within the 100-year flood plain, had significant cultural resources, etc.). Thus, the most suitable undeveloped portion of the 100-acre park is the proposed 3.0 acre site.

Under Alternative 2, the Gymnasium/Community Building would be rotated 90 degrees. This alternative requires significantly more grading, has a larger overall footprint of disturbance, but results in a lower elevation when viewed from Avenue P and from the nearby residences south of the park. It would also encroach into the 100-year flood plain, requiring that the foundation be raised above the 100-year flood level.

The Revised Site Plan Alternative would meet all of the basic project objectives. However, the alternative would result in a larger area of site disturbance, more grading, and the foundation would need to be raised above the 100-year flood level, resulting in greater engineering and construction costs than the proposed project. Furthermore, this alternative would have additional impacts to biological and cultural resources. In general, it is considered less impactful to avoid a 100-year flood zone than to encroach upon it and mitigate with a raised foundation.

Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative. In addition, the *CEQA Guidelines* (Section 15126.6(e)(2)) require that, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Project Alternative would result in the least environmental impacts. Next to the No Project Alternative, and the Proposed Project would have the least impacts to the environment. After the No Project Alternative and the Proposed Project, the Revised Site Plan Alternative is the alternative that would have the least impacts, and therefore is the environmentally superior alternative; however its impacts are virtually the same as the impacts of the proposed project. Given the constraints provided in the previous planning analysis for the entire Stephen Sorensen County Park (see Appendix B of the Draft EIR), additional alternatives for the proposed project site and site plan are not available.

None of the project alternatives satisfy the project objectives as well as the proposed project. In addition, the proposed project is consistent with existing planning and zoning for the site, which represent the County's recommended and preferred use of the site. The proposed project site was selected over the alternatives because the proposed project would avoid additional impacts to biological resources, cultural resources, and it would avoid the flood zone. Although not a consideration under CEQA, the proposed project would be less expensive as compared to the alternatives.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
3.1: Aesthetics		
Impact 3.1.1: The proposed project would not have a substantial adverse effect on a scenic vista.	None required.	No mitigation required.
Impact 3.1.2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required.	No mitigation required.
Impact 3.1.3: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.	None required.	No mitigation required.
Impact 3.1.4: The proposed project would not create a new source of light or glare which would adversely affect day or nighttime views in the area.	AES-1: Lighting. All on-site lighting shall be designed to cast light downward, in the immediate vicinity of the light post or bollard. Lighting shall be placed and designed to avoid light spillage beyond the limits of the park. AES-2: Glare. To reduce any potential glare from project headlights to a less-than-significant level, all new parking lot areas adjacent to Avenue P shall include a block wall at a height that exceeds the level of vehicle headlights.	Less than significant.
Impact 3.1.5: The proposed project would not result in an adverse cumulative aesthetic impact.	None required.	No mitigation required.
3.2: Air Quality		
Impact 3.2.1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	None required.	No mitigation required.
Impact 3.2.2: Project construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	AIR 1a: Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications. AIR 1b: Applicant shall ensure that contractors maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions. AIR 1c: Wheel washers shall be installed where vehicles exit the construction site onto paved roads. AIR 1d: Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.	Less than significant.
Impact 3.2.3: Project operation would not violate air quality standards or contribute substantially to an existing or projected air quality violation during long-term operation.	None required.	No mitigation required.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.2.4: The project would not conflict with implementation of state goals for reducing greenhouse gas emissions or any other applicable plan, policy or regulation and thereby have a negative effect on Global Climate Change.	None required.	No mitigation required.
Impact 3.2.5: The project would not create objectionable odors affecting a substantial amount of people.	None required.	No mitigation required.
Impact 3.2.6: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) or for greenhouse gas emissions.	None required.	No mitigation required
3.3 Biological Resources		
Impact 3.3.1: The proposed project would not have a substantial adverse affect, either directly or through habitat modifications, on any specie identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	<p>BIO-1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.</p> <p>BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present. If any burrowing owls are identified, occupied burrows (including a minimum 250-foot non-disturbance buffer zone around any occupied burrow) shall not be disturbed during the nesting season (February 1 through August 31 for owls). The size of the non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.</p> <p>If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County shall adhere to the CBOC guidelines regarding burrowing owls. The proposed mitigation will follow the CBOC guidelines for mitigation and can include land mitigation and/ or passive mitigation among others. If land mitigation is determined to be required, the County would adhere to the habitat mitigation acquisition ratios in the CBOC guidelines and would enter into an agreement with CDFG regarding the amount of land mitigation based on specific criteria. Alternatively, passive relocation will include consultation and approval from the CDFG and the County before implementation. Passive relocation is defined as encouraging owls to move from occupied</p>	Less than significant.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
	<p>burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:</p> <p>Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.</p> <p>With incorporation of the above measure and adherence to the CBOC guidelines, impacts would be less significant.</p> <p>BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 2:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (<i>Spermophilus mohavensis</i>). The agreed upon 2:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.</p> <p>Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 2:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to <i>Croton cryptanthus</i>, if present.</p> <p>BIO-4: Southern Grasshopper Mouse. Preconstruction surveys for the southern grasshopper mouse shall occur prior to ground disturbing activities. Five consecutive nighttime trapping surveys shall be conducted by a qualified biologist. If southern grasshopper mice are trapped, they shall be relocated to a nearby location containing suitable habitat. Trapping techniques and methodology, and release locations shall be coordinated with the CDFG prior to initiating surveys. A completion letter shall be prepared and submitted to the County and the CDFG within 30 days following the completion of trapping surveys.</p> <p>BIO-5: Nesting Resident and/or Migratory Birds including Raptors. Within 30 days of any project ground disturbing or vegetation removal actions during the nesting season (February 1 through August 31), the County shall have a qualified biologist conduct a pre-construction nesting bird and survey. The biologist shall be qualified to determine the status and stage of nesting efforts by resident and/or migratory birds including locally breeding raptor species without causing intrusive disturbance. This survey should cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.</p> <p>If an active nesting effort is confirmed or considered likely by the biologist, the nest site shall be avoided and a non-disturbance buffer zone established by the biologist and approved by the County in consultation with the</p>	

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
	CDFG. The nest site avoidance and non-disturbance buffer zone shall be maintained until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist. If nest avoidance is not feasible, then the County shall obtain the necessary permits or authorizations from the USFWS and/or CDFG to impact the nesting effort that could require taking the young nestlings to a qualified wildlife rehabilitation center.	
Impact 3.3.2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	None required.	No mitigation required.
Impact 3.3.3: The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	None required.	No mitigation required.
Impact 3.3.4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Implement Mitigation Measures BIO-1 through BIO-4.	Less than significant.
Impact 3.3.5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None required.	No mitigation required.
Impact 3.3.6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	None required.	No mitigation required.
Impact 3.3.7: The proposed project would not result in adverse cumulatively considerable impacts on biological resources including loss of habitat for native plant and wildlife species.	None required.	No mitigation required.
3.4: Cultural Resources		
Impact 3.4.1: The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.	CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be	Less than significant.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
	<p>present with each operator of earth-moving equipment (i.e., for grading, excavation, trenching). The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.</p> <p>CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist and a qualified paleontologist shall provide a mandatory cultural resource orientation to all construction personnel (i.e. those personnel associated with earth-moving equipment and activities) working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.</p>	
<p>Impact 3.4.2: The proposed project would not cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.</p>	<p>None required.</p>	<p>No mitigation required.</p>
<p>Impact 3.4.3: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</p>	<p>CUL-3: Exposure of Previously Unidentified Paleontological Resources: In the event that paleontological resources are discovered, the County shall notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in <i>CEQA Guidelines</i> Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the County determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted for review and approval prior to implementation.</p>	<p>Less than significant.</p>
<p>Impact 3.4.4: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.</p>	<p>CUL-4: Exposure of Previously Unidentified Human Remains. In concert with Measures CUL-1 and CUL-2, mitigation for exposure of previously unidentified human remains is as follows - if human remains are found, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the county Coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American who will then serve as consultant on how to proceed with the remains (e.g. avoidance, reburial).</p>	<p>Less than significant.</p>
<p>Impact 3.4.5: The proposed project would not significantly impact cultural and historic resources on a cumulative level.</p>	<p>None required.</p>	<p>No mitigation required.</p>

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
3.5: Geology		
Impact 3.5.1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, due to strong seismic ground shaking.	GEO-1: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. Site specific geotechnical investigations and or recommendations shall be prepared for the approved gymnasium and other associated facilities. Prior to final building approvals, geotechnical engineering recommendations regarding mitigation and reduction of seismic hazards for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ³ The purpose of these guidelines is to protect the public safety from seismic effects.	Less than significant.
Impact 3.5.2: The proposed project would not be located on a geologic unit that would become unstable, and potentially subside or be damaged by ground failure due to liquefaction.	GEO-2: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. The project applicant shall prepare a site specific, design level geotechnical investigation for the approved project to determine the particular project designs and provide site specific engineering recommendations for mitigation of liquefiable soils. Liquefiable soils under the conditions described in the geotechnical report shall be mitigated according to the requirements of the Seismic Hazards Mapping Act. Prior to incorporation into the project, geotechnical engineering recommendations regarding the mitigation and reduction of liquefaction for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ⁴ The purpose of these guidelines is to protect the public safety from seismic effects such as liquefaction.	Less than significant.
Impact 3.5.3: The proposed project would not be located on expansive soils, potentially damaging foundations and thereby creating substantial risks to life or property.	GEO-3: The earthwork and site preparation of the project site, prior to placement of project improvements including foundations, shall include the mitigation of expansive soils in accordance with Section 1805.8 of the 2007 California Building Code (or equivalent within a superseding version if applicable). The recommendations for mitigation of expansive soils shall be made by a California licensed geotechnical engineer or engineering geologist and the approved project will comply with said report.	Less than significant.
Impact 3.5.4: The proposed project construction activities would not result in substantial soil erosion or the loss of topsoil.	None Required.	No mitigation required.
Impact 3.5.5: The proposed project site would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems	None required.	No mitigation required.
Impact 3.5.6: The proposed project would not result in adverse cumulatively considerable geology, soils, and seismicity impact.	None required.	No mitigation required.

³ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

⁴ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
3.6 Hazards and Hazardous Materials		
Impact 3.6-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	None required.	No mitigation required.
Impact 3.6-2: The proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	None required.	No mitigation required.
Impact 3.6-3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required.	No mitigation required.
Impact 3.6.4: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	None required.	No mitigation required.
Impact 3.6.5: The proposed project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.	None required.	No mitigation required.
Impact 3.6.6: The proposed project would not be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area.	None required.	No mitigation required.
Impact 3.6.7: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required.	No mitigation required.
Impact 3.6.8: The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	None required.	No mitigation required.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.6.9: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials on a cumulative level.	None required.	No mitigation required.
3.7 Hydrology		
Impact 3.7.1: Construction activities associated with development of the project would not result in impacts on surface water quality through increased sedimentation in stormwater runoff. In addition, development of the project site could result in increased nonpoint source pollution in stormwater runoff during operation.	None required.	No mitigation required.
Impact 3.7.2: The proposed development would not result in a net increase in impervious surfaces which would reduce the amount of area available for groundwater recharge thereby impacting available groundwater supplies.	None required.	No mitigation required.
Impact 3.7.3: Project development would not increase impervious surfaces which could cause peak runoff to exceed to drainage capacities and cause flooding on or off site	None required.	No mitigation required.
Impact 3.7.4: The proposed project would not result in adverse cumulatively considerable hydrology or water quality impacts.	None required.	No mitigation required.
3.8: Land Use and Planning		
Impact 3.8.1: The proposed project would not physically divide an established community.	None required.	No mitigation required.
Impact 3.8.2: The proposed project would not conflict with applicable land use plans, policies or regulations of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	None required.	No mitigation required.
Impact 3.8.3: The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan.	None required.	No mitigation required.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.8.4: The proposed project would not contribute to an adverse cumulative land use impact.	None required.	No mitigation required.
3.9: Noise		
Impact 3.9.1: Activities associated with the construction of the proposed project would not result in the generation of noise, which potentially could adversely affect adjacent sensitive receptors (e.g., residences).	<p>NOI-1: Construction Operation Hours and Noticing. Project construction will be limited to between the hours of 7:00 a.m. and 4:00 p.m. (which is reduced from the normally allowable Los Angeles County construction hours of 7:00 a.m. to 7:00 p.m.). Signs shall be posted on-site informing neighbors of the duration and hours of the construction activities.</p> <p>NOI-2: Construction Equipment Maintenance. All on-site construction equipment shall be inspected weekly by the contractor to ensure that they have properly operating mufflers and that are in good operating condition.</p> <p>NOI-3: Construction Staging Areas. All construction staging areas will be as far away as is practical from the nearest homes. Construction staging will occur adjacent to the area of grading in the proposed parking lot area, which is no closer than 250 feet from the nearest sensitive noise receptors. The staging for construction of the Gymnasium/Community Building will occur on the proposed parking lot area of the site. Staging for the parking lot will occur on other open areas of the park.</p>	Less than significant.
Impact 3.9.2: Activities associated with the construction of the proposed project would not result in the generation of ground-borne vibration, which potentially could adversely affect adjacent sensitive receptors.	None required.	No mitigation required.
Impact 3.9.3: Operational noise associated with near- and long-term development of the proposed project would not result in permanent increases in the ambient noise environment.	None required.	No mitigation required.
Impact 3.9.4: Increases in traffic from the project in combination with other development would not result in cumulatively considerable noise increases.	None required.	No mitigation required.
3.10: Public Services		
Impact 3.10.1: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.	None required.	No mitigation required.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.10.2: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.	None required.	No mitigation required.
Impact 3.10.3: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools. The construction of which could cause significant environmental impacts.	None required.	No mitigation required.
Impact 3.10.4: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered parks. The construction of which could cause significant environmental impacts.	None required.	No mitigation required.
Impact 3.10.5: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered public facilities. The construction of which could cause significant environmental impacts.	None required.	No mitigation required.
Impact 3.10.6: The proposed project would not result in a substantial cumulative impact to public services.	None required.	No mitigation required.
3.11: Transportation/Traffic		
Impacts 3.11.1 and Impact 3.11.2: The proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) nor would the project exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways.	None required.	No mitigation required.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.11.3: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.	None required.	No mitigation required.
Impact 3.11.4: The proposed project would not result in inadequate emergency access.	None required.	No mitigation required.
Impact 3.11.5: The proposed project would not result in inadequate parking capacity.	None required.	No mitigation required.
Impact 3.11.6: The proposed project would not conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnout, bicycle racks).	None required.	No mitigation required.
Impact 3.11.7: Cumulative development would not significantly impact local intersections and street segments in the project vicinity during construction.	None required.	No mitigation required.
3.12: Utilities		
Impact 3.12.1: The project would not conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board.	None required.	No mitigation required.
Impact 3.12.2: The proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	UTL-1: Landscaped area shall be designed with drought tolerant species. Planting beds shall be heavily mulched in accordance with water-conserving landscape design practices.	Less than significant.
Impact 3.12.3: The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.	None required.	No mitigation required.
Impact 3.12.4: The project would have sufficient water supplies available to serve the project from existing entitlements and resources, and would not need new or expanded entitlements.	None required.	No mitigation required.
Impact 3.12.5: The proposed project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	None required.	No mitigation required.

TABLE 2-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STEPHEN SORENSEN COUNTY PARK GYMNASIUM COMMUNITY BUILDING PROJECT

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.12.6: The project would not be served by a landfill that does not have sufficient permitted capacity to accommodate the project's solid waste disposal needs.	None required.	No mitigation required.
Impact 3.12.7: The proposed project would comply with federal, state and local statutes and regulations related to solid waste.	None required.	No mitigation required.
Impact 3.12.8: The proposed project could result in adverse cumulatively considerable impacts to water supply or infrastructure.	None required.	No mitigation required.

CHAPTER 3

Revisions to the Draft EIR

This chapter presents new or revised information included in the Draft EIR based upon Lead Agency staff comments or by comments on the Draft EIR. The changes are in order as they appear in the Draft EIR and include text revisions resulting from: additional or revised information required to prepare a response to a specific comment, updated information which has become out-of-date as a result of the passage of time, and/or typographical errors. The new text being added to the Draft EIR is underlined (except where all of the indicated text is new); deleted language is indicated by ~~striketrough~~.

The revisions, as provided in this chapter, do not alter or modify the significance conclusions in the Draft EIR. The following corrections and changes are made to the Draft EIR, and are incorporated herein as part of the Final EIR.

Executive Summary

Page ES-7, Table ES-1

BIO – 1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.

Page ES-7, Table ES-1

BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.

If any burrowing owls are identified, occupied burrows (including a minimum 250-foot non-disturbance buffer zone around any occupied burrow) shall not be disturbed during the nesting season (February 1 through August 31 for owls). ~~including a minimum 250-foot non-disturbance buffer zone around any occupied burrow.~~ The size of the non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.

If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County ~~shall implement a burrowing owl passive relocation program that~~ shall adhere to the CBOC guidelines regarding burrowing owls. The proposed mitigation will follow the CBOC guidelines for mitigation and can include land mitigation and/ or passive mitigation among others. If land mitigation is determined to be required, the County would adhere to the habitat mitigation acquisition ratios in the CBOC guidelines and would enter into an agreement with CDFG regarding the amount of land mitigation based on specific criteria. Alternatively, passive relocation will include consultation and approval from the CDFG and the County before implementation. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:

Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.

With incorporation of the above measure and adherence to the CBOC guidelines, impacts would be less significant.

Page ES-8, Tables ES-1

BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 24:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the

DTRNA Expansion Area for the benefit of the Mohave ground squirrel (*Spermophilus mohavensis*). The agreed upon 24:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.

Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 24:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.

Page ES-9, Tables ES-1

CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment (i.e., for grading, excavation, trenching). The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.

Page ES-10, Tables ES-1

CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist and a qualified paleontologist shall provide a mandatory cultural resource orientation to all construction personnel (i.e., those personnel associated with earth-moving equipment and activities) working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.

Page ES-10, Tables ES-1

CUL-3: Exposure of Previously Unidentified Paleontological Resources. In the event that paleontological resources are discovered, the County project proponent (~~depending~~

~~upon the project component) will~~ shall notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in *CEQA Guidelines* Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the ~~County project proponent~~ determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted ~~to the project proponent~~ for review and approval prior to implementation.

Chapter 2 Project Description

Page 2-12, Fourth Paragraph

Access to the proposed Gymnasium/Community Building Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. ~~No~~ One new driveway access points ~~to adjacent to East Avenue P~~ is ~~streets are~~ proposed.

Page 2-5, Figure 2-3: Building Site Plan

Replacement of Figure 2-3: Building Site Plan, with updated graphic containing the corrected amount of parking spaces provided by the proposed project.

Section 3.3 Biology Resources

Page 3.3-12, Fifth Paragraph

BIO – 1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.

Page 3.3-12, Sixth Paragraph

BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.

If any burrowing owls are identified, occupied burrows (including a minimum 250-foot non-disturbance buffer zone around any occupied burrow) shall not be disturbed during the nesting season (February 1 through August 31 for owls). ~~including a minimum 250-foot non-disturbance buffer zone around any occupied burrow.~~ The size of the non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.

If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County ~~shall implement a burrowing owl passive relocation program that~~ shall adhere to the CBOC guidelines regarding burrowing owls. The proposed mitigation will follow the CBOC guidelines for mitigation and can include land mitigation and/ or passive mitigation among others. If land mitigation is determined to be required, the County would adhere to the habitat mitigation acquisition ratios in the CBOC guidelines and would enter into an agreement with CDFG regarding the amount of land mitigation based on specific criteria. Alternatively, passive relocation will include consultation and approval from the CDFG and the County before implementation. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:

Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.

With incorporation of the above measure and adherence to the CBOC guidelines, impacts would be less significant.

Page 3.3-13, Third Paragraph

BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 24:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (*Spermophilus mohavensis*). The agreed upon 24:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.

Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 24:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.

Section 3.4 Cultural Resources

Page 3.4-4, Fifth Paragraph

The current project area is encompassed by CA-LAN-192, a large prehistoric site that has been investigated since the 1920s by a series of researchers (Padon and Love 2004:4-8; Price et al. 2005:1.4-1.5; Lloyd 2005, Lloyd ~~in prep~~ 2008; Price et al. ~~in prep~~ 2008).

Page 3.4-5, Third Paragraph

The County retained Applied EarthWorks, Inc. (AE) to implement the cultural resources mitigation measures. The mitigation measure stipulating the analysis of existing collections from LAN-192 has been carried out and the results published in 2008 (Price, et al. 2008). Reports including the results of the technical analysis and collections from the site are available at the offices of the LACDPW.

Page 3.4-5, Fourth Paragraph

Per the agreed upon mitigation measures, construction in the vicinity of the find was temporarily halted while AE conducted emergency excavations, which constituted "treatment" for the adverse effects caused by the inadvertent uncovering of the deposit. Documentation of the technical

analyses, construction monitoring, and emergency excavations are currently being completed (Price et al. ~~in prep~~ 2008).

Page 3.4-6, Fourth Paragraph

For these reasons, the proposed project will not have an adverse effect on historic properties (per 36 CFR 800.5) and will not have a significant impact on historical resources (per CEQA) (Lloyd, ~~in prep~~ 2008).

Page 3.4-7, Third Paragraph

Those contacted were: San Fernando Band of Mission Indians, John Valenzuela, Chairperson; San Manuel Band of Mission Indians, Deron Marquez, Chairperson and Bernadette Brierty, Cultural Resources Coordinator; Ron Adrade; Charles Cook; Geri Farr, Randy Guzman-Folkes; Ali Kashani; Beverly Salazar-Folkes; and Henry Williams.

Page 3.4-7, Fourth Paragraph

Charles Cook, Beverly Salazar-Folkes, Randy Guzman-Folkes, and Harold Williams responded to the 2004 contact letters. ~~All~~ Many of the respondents emphasized the importance of adequate archaeological evaluation and the presence of a Native monitor. Harold Williams, a member of the Kawaiisu tribe, and Randy Guzman-Folkes, of the Chumash-Tataviam, were retained by Applied Earthworks as monitors.

Page 3.4-11, First Paragraph

~~Senate Bill 18~~

~~Effective January 2005 and in conformance with Senate Bill 18, which was signed into law by the Governor of California in September 2004, on or after March 1, 2005, local governments are required to consult with tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to “provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places” (State of California, 2005).~~

~~According to the Tribal Consultation Guidelines: Supplement to General Plan Guidelines (2005), the following identifies the contact and notification responsibilities of local governments:~~

- ~~Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the Native American Heritage Commission (NAHC)) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).~~
- ~~Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code §65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.~~
- ~~Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code §65092).~~

Page 3.4-14, First Paragraph

This area was not investigated during the 2007 ~~current~~ geoarchaeological study due to the hazards associated with trenching into the road base.

Page 3.4-14, Third Paragraph

CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment (i.e., for grading, excavation, trenching). The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.

Page 3.4-14, Third Paragraph

CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist and a qualified paleontologist shall provide a mandatory cultural resource orientation to all construction personnel (i.e., those personnel associated with earth-moving equipment and activities) working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.

Page 3.4-16, First Paragraph

CUL-3: Exposure of Previously Unidentified Paleontological Resources. In the event that paleontological resources are discovered, the County project proponent ~~(depending upon the project component)~~ will ~~shall~~ notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in *CEQA Guidelines* Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the County project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted ~~to the project proponent~~ for review and approval prior to implementation.

Section 3.11 Transportation and Traffic

Page 3.11.1, Third Paragraph

Access to the proposed Gymnasium/Community Building Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. ~~No~~ One new driveway access points ~~to adjacent to East Avenue P~~ is ~~streets are~~ proposed.

Section 3.14 NEPA Environmental Assessment (Section in Draft EIR)

Page 3.14-14, Vegetation and Wildlife

BIO-1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific

Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.

BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.

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With incorporation of the above measure and adherence to the CBOC guidelines, impacts would be less significant.

Page 3.14-14, Vegetation and Wildlife

BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 24:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (*Spermophilus mohavensis*). The agreed upon 24:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.

Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 24:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.

Page 3.14-8, Historic, Cultural and Archaeological Resources.

CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment (i.e., for grading, excavation, trenching). The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.

Page 3.14-8, Historic, Cultural and Archaeological Resources

CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist and a qualified paleontologist shall provide a mandatory cultural resource orientation to all construction personnel (i.e., those personnel associated with earth-moving equipment and activities) working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.

Page 3.14-9, Historic, Cultural and Archaeological Resources

CUL-3: Exposure of Previously Unidentified Paleontological Resources. In the event that paleontological resources are discovered, the County project proponent (~~depending upon the project component~~) will ~~shall~~ notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in *CEQA Guidelines* Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the County project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted ~~to the project proponent~~ for review and approval prior to implementation.

Chapter 7.0 Mitigation Monitoring Program Compliance Report

Page 7-2, Table 7-1

BIO -1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.

Page 7-2, Table 7-1

BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.

If any burrowing owls are identified, occupied burrows (including a minimum 250-foot non-disturbance buffer zone around any occupied burrow) shall not be disturbed during the nesting season (February 1 through August 31 for owls). ~~including a minimum 250-foot non-disturbance buffer zone around any occupied burrow.~~ The size of the non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.

If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County ~~shall implement a burrowing owl passive relocation program that~~ shall adhere to the CBOC guidelines regarding burrowing owls. The proposed mitigation will follow the CBOC guidelines for mitigation and can include land mitigation and/ or passive mitigation among others. If land mitigation is determined to be required, the County would adhere to the habitat mitigation acquisition ratios in the CBOC guidelines and would enter into an agreement with CDFG regarding the amount of land mitigation based on specific criteria. Alternatively, passive relocation will include consultation and approval from the CDFG and the County before implementation. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:

Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.

With incorporation of the above measure and adherence to the CBOC guidelines, impacts would be less significant.

Page 7-3, Table 7-1

BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 24:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (*Spermophilus mohavensis*). The agreed upon 24:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.

Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 24:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.

Page 7-2, Table 7-1

An error occurred with respect to the mitigation listed in Table 7-1. The following mitigation has been inserted to properly reflect the conclusions and mitigation measures listed in the Executive Summary, Section 3.2 Air Quality and Section 3.14 NEPA Environmental Assessment.

AIR 1a. Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications. ~~**AIR-1a:** The proposed project shall obtain Silver LEED status, or an equivalent or better rating for energy efficiency and other "green building" characteristics.~~

Page 7-2, Table 7-1

AIR 1d. Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.

ATTACHMENT A

Addition to Cultural Resources Appendices: Native American Consultation Letter



5090 N. Fruit Avenue
Suite 101
Fresno, CA 93711-3064
(559) 229-1856
FAX (559) 229-2019

25 October 2007

TO: Native American Representatives

FROM: Jay B. Lloyd, Applied EarthWorks, Inc.

RE: Native American Consultation
Expansion of Stephen Sorensen Park, Lake Los Angeles, Los Angeles County

Applied EarthWorks, Inc. (Æ) is currently assisting the Los Angeles County Department of Public Works in their proposed expansion of Stephen Sorensen Park (formerly the Lake Los Angeles Community Park). On behalf of the County, we are consulting with interested Native American representatives and performing other tasks related to cultural resources management. The purpose of this letter is to initiate consultation and solicit any concerns you may have about the project.

Stephen Sorenson Park is located in the unincorporated area of Lake Los Angeles. The project site is approximately 3.0 acres. The proposed project will expand the park from 15 to 18 acres and add a gymnasium/community building. The project is subject to the requirements of the California Environmental Quality Act, the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, and the requirements of Los Angeles County Department of Public Works. The attached location map (*Lovejoy Buttes 7.5' USGS Quadrangle*, 1991 edition) shows the area for the proposed park expansion, which includes the north side of the existing park.

This project is located in an open area that was recently surveyed for historical and prehistoric resources. This survey identified a sparse scatter of prehistoric cultural material adjacent to the known boundaries of CA-LAN-192, which were subsequently enlarged to encompass the newly identified material (Lloyd 2005). However, the pedestrian survey was not able to ascertain whether the identified surface artifacts represented an intact cultural deposit. The footprint of the current expansion is located within the enlarged site boundaries.

Over the past 50 years several excavations at CA-LAN-192 have revealed a deep midden deposit with numerous ground and flaked stone tools, hundreds of shell beads, as well as human remains. The excavations (and subsequent monitoring) have documented the importance of CA-LAN-192 as a major village occupied as early as 2,500 years ago. In 1996, as part of the development of Phase 1 of Lake Los Angeles Community Park, a cap of sterile fill was placed over the portion of the site where the development was planned in order to protect and preserve this significant site. Roger Robinson monitored the capping of this part of the site (Robinson 1996).

Æ will be conducting a geoarchaeological and buried site testing study within the current expansion area to determine whether the scattered surface artifacts observed during the 2005 survey remain in



situ or have been redeposited, and whether intact subsurface cultural deposits are present within the project area. In accordance with county, state, and federal guidelines, we request your assistance in identifying issues of concern to the local Native American community. If the planned activities at Stephen Sorensen Park are of concern to you, or if you would like the opportunity to comment on the project or obtain additional information, please contact me at the address or phone number above. We would appreciate receiving your review by November 30, 2007. We appreciate your consideration of this matter and look forward to hearing from you.

REFERENCES CITED:

Lloyd, Jay B.

2005 *Cultural Resources Survey for Stephen Sorensen County Park Phase III Expansion, Los Angeles County, California*. Prepared for ESA Water, Los Angeles, California. Applied Earthworks, Inc., Fresno, California.

Robinson, Roger

1996 *Archaeological Investigations at CA-LAN-192 (Lovejoy Springs): Final Report on Mitigation and Monitoring Associated with the Lake Los Angeles Community Park, County of Los Angeles*. Prepared for the Los Angeles County Department of Parks and Recreation.

LIST OF RECIPIENTS:

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Los Angeles, CA 90020

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Geri Farr
P O Box 266
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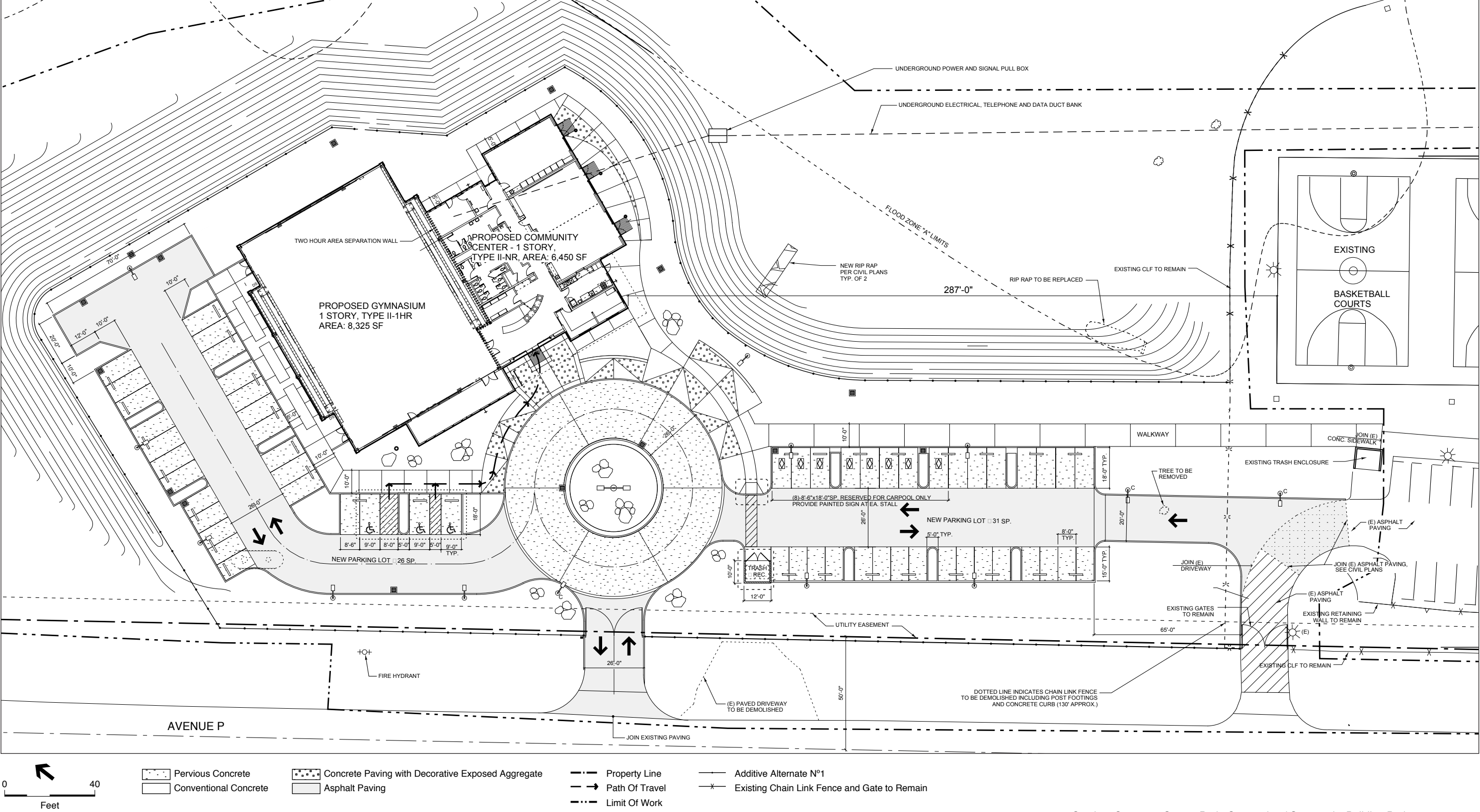
Henry Williams
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3044 East Street
Simi Valley, CA 93065-3929

Ali Kashani
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ATTACHMENT B

Replacement of Figure 2-3: Building Site Plan



SOURCE: Carde Ten Architects, 2009.

Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237.01

Figure 2-3
Building Site Plan

CHAPTER 4

Responses to Written Comments on the Draft EIR

This chapter includes copies of comment letters received during the public review period for the Draft EIR and responses to those comments. Where responses have resulted in changes to the text of the Draft EIR, these changes also appear in Chapter 3 of this Final EIR.

The following comment letters (with the date of the letter) were received in response to the Draft EIR:

State Agencies and Organizations

Letter 1: California Department of Fish and Game (CDFG) (September 3, 2009).

Letter 2: County of Los Angeles Department of Parks and Recreation (September 3, 2009).

Letter 3: State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (September 9, 2009).

Letter 4: County of Los Angeles, Department of Public Works/ Land Development Decision (October 20, 2009).

A copy of each letter is provided in the order identified above. Individual comments within each letter are numbered in the right hand margin, and the responses that follow are correspondingly numbered.

Comment Letter #1

From: Scott P. Harris [SPHARRIS@dfg.ca.gov]
Sent: Thursday, September 03, 2009 10:54 AM
To: Dioum, Alioune - Consultant
Subject: Sorensen County Park Gymnasium Community Building Project

Subject: Draft Environmental Impact Report for Sorensen County Park Gymnasium Community Building Project, 2008061091, Los Angeles County

Mr. Dioum

The Department of Fish and Game (Department) has reviewed the draft Environmental Impact Report for the development of 3 acres of land for the subject project located at the Stephen Sorensen County Park in the unincorporated area of Lake Los Angeles County in the eastern Antelope Valley. The project site supports rudural and desert scrub habitat.

The Department has prepared the following statements and comments pursuant to our authority as Trustee Agency with jurisdiction over natural resources affected by the project under the California Environmental Quality Act (CEQA Section 15386) and Responsible Agency (Section 15381) over those aspects of the proposed project that come under the purview of the California Endangered Species Act (Fish and Game Code Section 2050 et seq).

Mitigation Measures

Desert tortoise - Mitigation Measure BIO-1 proposes to address desert tortoise (tortoise) by performing an on-site preconstruction survey and moving tortoise off site onto suitable habitat by a biologist with a Scientific Collectors Permit. Please be aware that if a tortoise is found during project clearance surveys and is picked up or otherwise handled, that is considered take under the California Endangered Species Act (CESA) and the Federal Endangered Species Act (FESA) and requires a CESA Incidental Take Permit from DFG and further consultation with USFW before any form of take may occur. If tortoise surveys are conducted no greater than one year on the project site and zone of influence before commencement of site disturbances as recommend in USFW protocol for desert tortoise, and no tortoise are found, this is an indication that tortoise are not likely to wonder onto the site following a clearance survey of the project site and the installation of exclusion fencing and so take may be avoided.

1

Mohave Ground Squirrel - Mitigation Measure BIO-3 for Mojave ground squirrel (MGS) proposes a 1:1 habitat acquisition mitigation ratio. Please be aware that DFG has increased the minimum mitigation ratio for MGS to no less than 2:1 for loss of marginal habitat, which is the case for the subject project's condition. The cumulative losses to MGS habitat within it's range has necessitated increasing the ratio to fully mitigate for loss of habitat under CESA.

2

Burrowing Owl - Mitigation Ratio BIO-2 recommends passive relocation for mitigation for occupied burrowing owl habitat as per the California Burrowing Owl Consortium Guidelines. In order for the DEIR to conclude that impacts to burrowing owl are mitigated to less than significant, the Department recommends adherence to the habitat mitigation acquisition ratios in the CBOC.

3

Thank you for the opportunity to provide comments. Please contact me if you have any questions.

Scott Harris
Environmental Scientist
CA Department of Fish and Game
626/797-3170

Responses to Comment Letter 1 ☐

California Department of Fish and Game (CDFG)

Response I-1

As stated in Section 3.3.4, Biological Resources, ESA biologists conducted three, one-day surveys for the presence of or signs of desert tortoise on the project site and in an approximate 250-foot buffer north and east of the site. During these surveys, no special-status species or signs of special-status species were observed. Thus, it is unlikely that desert tortoise would be found and their presence is not assumed. Mitigation Measure BIO-1 further reduces potential impacts. The three previous surveys follow protocol and the proposed preconstruction survey for terrestrial animals would also follow protocol. In the unlikely event that desert tortoise was encountered, a take permit would be obtained. Mitigation Measure BIO-1 has been reworded to acknowledge commenter's statements and to clarify the mitigation proposed, as follows:

BIO – 1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.

Response I-2

This comment has been incorporated by updating Mitigation Measure BIO-3 to reflect CDFG's increased minimum mitigation ratio for Mojave Ground Squirrel to no less than 2:1 for the loss of marginal habitat.

BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave Ground Squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a ~~24~~:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (*Spermophilus mohavensis*). The agreed upon ~~24~~:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.

Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The ~~24~~:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.

Response 1-3

Mitigation Measure BIO-2 has been reworded to acknowledge commenter's statements and to clarify the mitigation proposed.

BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.

If any burrowing owls are identified, occupied burrows (including a minimum 250-foot non-disturbance buffer zone around any occupied burrow) shall not be disturbed during the nesting season (February 1 through August 31 for owls). ~~including a minimum 250-foot non-disturbance buffer zone around any occupied burrow.~~ The size of the non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.

If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County ~~shall implement a burrowing owl passive relocation program that~~ shall adhere to the CBOC guidelines regarding burrowing owls. The proposed mitigation will follow the CBOC guidelines for mitigation and can include land mitigation and/ or passive mitigation among others. If land mitigation is determined to be required, the County would adhere to the habitat mitigation acquisition ratios in the CBOC guidelines and would enter into an agreement with CDFG regarding the amount of land mitigation based on specific criteria. Alternatively, passive relocation will include consultation and approval from the CDFG and the County before implementation. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:

Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.

With incorporation of the above measure and adherence to the CBOC guidelines, impacts would be less significant.



COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

"Creating Community Through People, Parks and Programs"

Russ Guiney, Director

Page

P 3.4-7	Second paragraph: Notes and Letters from the consultations should be included in the appendices.	1
	Third paragraph: "Many of the respondents..." Who responded? Please indicate each respondent's name and title.	2
P 3.4-11	Last bullet point: State if any tribe has or has not filed a written request for the notice.	3
P 3.4-14	Impact 3.4-1. "...not investigated during the current geoarchaeological study due to the hazards associated...." Please explain what the hazards are.	4
P 3.4-16	CUL-3: "...the project proponent (depending upon the project component)" This is not clear. Please explain.	5
	CUL-3: A paleontologist will need to be on-site to monitor the excavation.	6
Appendix E	Page 2 of Dr. McLeod's letter:	
	1. Any substantial excavation in the sedimentary deposits in the proposed project area should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development.	7
	2. Sediment samples should be collected to determine the small vertebrate fossil potential in the rock units.	
	These two recommendations should be included as mitigation measures in the Cultural Resources section of the DEIR.	
	The location information is sensitive. Is this detailed information within acceptable professional standards of not revealing the location of archaeological sites?	
Appendix B Ch III-7	Fourth paragraph:	
	Fifth paragraph:	
Appendix B Ch III – 8	D.2.2.1 1267 JL Site 1	
Appendix B Ch III – 9		

Responses to Comment Letter 2 □

County of Los Angeles Department of Parks and Recreation

Response 2-1:

Please see Attachment A: Addition to the Cultural Resources Appendices at the end Chapter 3 Revisions to the Draft EIR. Attachment A is the documentation requested regarding the Native American Heritage Consultation. This information is from the Geoarchaeological Investigation (Lloyd, 2008) performed for the project site. The report itself was not attached to the EIR due to potential resource sensitivity.

Response 2-2:

Comment noted. Revisions to the text were made. One additional name was added to the list of persons contacted along with additional information regarding their responses. Please see Chapter 3, Revisions to the Draft EIR, in the Cultural Resources section (reference Page 3.4-7).

Response 2-3:

The proposed project does not require a general plan or specific plan amendment. As result, Senate Bill 18 (SB 18) is not applicable to this project. Changes to the EIR text have been made in the Regulatory Settings section and the paragraphs concerning SB 18 have been deleted. Please see Chapter 3, Revisions to the Draft EIR, in the Cultural Resources section (reference Page 3.4-11).

Response 2-4:

The 2008 Geoarchaeological Investigation (Lloyd, 2008) did not go into further detail about the hazards. AE was contacted by ESA on October 1, 2009 regarding the questions raised in the comment letter. The concern regarding a potential hazard involved the possibility that proposed trenching could undermine the road, causing it to slump or collapse entirely. In addition to the obvious hazard of trenching in the vicinity of a road, the logistical difficulties and costs associated with shutting down portions of Avenue P, providing traffic control, removing pavement, and repaving, would have been prohibitive.

Response 2-5:

Comment noted, this issue has been clarified and the text has been revised. The references to “project proponent” have been replaced with “the County.” Please see Chapter 3, Revisions to the Draft EIR, in the Cultural Resources section (reference Page 3.4-16).

Response 2-6:

The requirements of Mitigation Measure CUL-2: Construction Orientation, have been modified to require a qualified paleontologist to also perform a mandatory cultural resource orientation to applicable construction personnel working on the site. Mitigation Measure CUL-2 has been reworded to acknowledge commenter’s statements and to clarify the mitigation proposed, as follows:

CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist and a qualified paleontologist shall provide a mandatory cultural resource orientation to all construction personnel (i.e., those personnel

associated with earth-moving equipment and activities) working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.

As stated in Measure CUL-2, the orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction. A paleontological records search conducted by the Natural History Museum of Los Angeles County did not locate any records of vertebrate fossils within the project boundaries. Thus, the area is considered to be of low sensitivity and potential impacts are considered to be less than significant. Mitigation Measure CUL-3 was added as a precaution during grading and excavation. With the modifications to Mitigation Measure CUL-2, impacts would remain less than significant.

Response 2-7:

As stated under Impact 3.4.3, Dr. McLeod stated that the project area was underlain by igneous rocks and young sedimentary deposits, which are unlikely to harbor fossils at shallow depths. Dr. McLeod recommends monitoring in the case of “substantial excavations” into sedimentary deposits. A paleontological records search conducted by the Natural History Museum of Los Angeles County did not locate any records of vertebrate fossils within the project boundaries. Thus, the area is considered to be of low sensitivity and potential impacts are considered to be less than significant. Mitigation Measure CUL-3 was added as a precaution during grading and excavation. As stated in the project description, project excavation would not be substantial. Given the low paleontological sensitivity of the project area, Mitigation Measures CUL-2, Construction Orientation, and Mitigation Measure CUL-3, contingency paleontological mitigation, would be sufficient to mitigate potential impacts to paleontological resources.

Response 2-8:

Every attempt is made to protect information that may be potentially sensitive. The information within the Draft EIR relied on some of the information presented within the Planning Study. However, the cultural resources Draft EIR section was written to according to accepted protocol and did not contain any information that was sensitive or potentially sensitive. The cultural resource information provided in the Planning Study (attachment to the Draft EIR) gave the general location and identification number of various resources. The specific location and coordinates were not provided (the resource map covered the entire 100-acre designated park site). The exact, specific location of potentially sensitive cultural resources is not available to the general public. One must be a qualified archeologist in order to obtain such information. However, to ensure that every attempt is made to protect potentially sensitive resources, the cultural resources chapter of the Planning Study (attachment to the Draft EIR) has been removed from the EIR appendices and will be kept as a separate confidential appendix.



ARNOLD SCHWARZENEGGER
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

September 9, 2009

Alioune Dioum
Los Angeles County
900 South Fremont Avenue, 5th Floor
Alhambra, CA 91803-1331

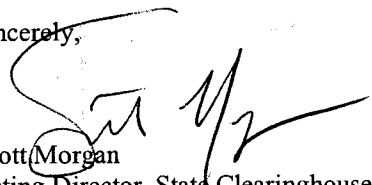
Subject: Stephen Sorensen County Park New Gymnasium and Community Building Project
SCH#: 2008061091

Dear Alioune Dioum:

The State Clearinghouse submitted the above named Joint Document to selected state agencies for review. The review period closed on September 8, 2009, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,


Scott Morgan
Acting Director, State Clearinghouse

1

**Document Details Report
State Clearinghouse Data Base**

SCH# 2008061091
Project Title Stephen Sorensen County Park New Gymnasium and Community Building Project
Lead Agency Los Angeles County

Type JD Joint Document

Description The County of Los Angeles is proposing Gymnasium/Community Building park improvements on ~3.0 acres of land within the 100 acre Stephen Sorensen County Park, located at 16801 East Avenue P, in the unincorporated community of Lake Los Angeles, in northern Los Angeles County, CA, ~15 miles east of the City of Palmdale. Improvements consist of a combined gymnasium and community building (with a multi-purpose room and a classroom), an expanded parking lot area with 57 new parking spaces, landscaping, irrigation and security lighting. Previous park improvements that have been constructed to date: 1) a 3 acre development that included a children's playground with sand and playground equipment, men's and women's restrooms, and picnic tables in the central-southern portion of the park, and 2) a 12 acre expansion in the southwestern portion of the park, just east of the currently proposed Gymnasium/Community Building improvements, which included lighted basketball courts, baseball diamonds with bleachers, soccer fields, security lighting, landscaping and irrigation, walkways and additional parking.

Lead Agency Contact

Name	Alioune Dioum		
Agency	Los Angeles County		
Phone	626 300-2357	Fax	
email			
Address	900 South Fremont Avenue, 5th Floor		
City	Alhambra	State CA	Zip 91803-1331

Project Location

County	Los Angeles			
City				
Region				
Lat / Long	34° 36' 19.20" N / 117° 49' 52.35" W			
Cross Streets	E Avenue P and 170th Street E			
Parcel No.	3073-001-902			
Township		Range	Section	Base

Proximity to:

Highways	S 138
Airports	
Railways	
Waterways	
Schools	Cornerstone Christian Academy
Land Use	Open Space/R-A-20000/Open Space

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Landuse; Noise; Public Services; Septic System; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

Reviewing Agencies	Resources Agency; Department of Conservation; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Bd., Region 6 (Victorville); Native American Heritage Commission
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Date Received	07/23/2009	Start of Review	07/23/2009	End of Review	09/08/2009
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Note: Blanks in data fields result from insufficient information provided by lead agency.

Responses to Comment Letter 3 □

State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit

Response 3-1:

This letter acknowledges State Clearinghouse circulation of the Draft EIR to state agencies for review. The letter additionally acknowledges that the County of Los Angeles Department of Public Works has complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to CEQA. No further response is required.

DRAFT

PDF TO: ADioum@dpw.lacounty.gov

October 20, 2009

TO: David P. Howard
Project Management Division 1
Department of Public Works

Attention Alioune Dioum

FROM: Steve Burger
Land Development Division
Department of Public Works

**DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (DSEIR)
STEPHEN SORENSEN COUNTY PARK GYMNASIUM AND
COMMUNITY BUILDING PROJECT
STATE CLEARINGHOUSE NO. 2008061091**

We reviewed the DSEIR for the Stephen Sorensen County Park Gymnasium and Community Building. The project consists of a combined gymnasium and community building, an expanded parking lot area with 57 new parking spaces, landscaping, irrigation and security lighting on approximately 3.0 acres of land within the 100-acre Stephen Sorensen County Park.

The following comments are for your consideration:

Hazards □ Geotechnical Soils □ Geology

The DSEIR did not include all of the geotechnical reports as previously requested. Geotechnical reports dated 03/13/08, 01/30/08, and 11/26/07 by Leighton Consulting, Inc. were missing from the DSEIR.

If you have any questions regarding Geotechnical comments, please contact Jeremy Wan at (626) 458-4925.

1

Services-Traffic □ Access

- The Access and Parking section of Section 2 □ Project Description, Page 2-12 of the DSEIR states that □ no new driveway access points to adjacent streets are proposed □ and that □ access to the proposed Gymnasium/Community Building

2

Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. □ These two statements can also be found in Section 3.11.2 □ Environmental Setting, Project Site Access, Page 3.11-1 of the DSEIR. These statements contradict the site plan that is contained within the NOP document, the DSEIR, and the plot plan that was previously submitted for approval. These site plans show a new driveway cut to Avenue P in addition to utilizing the existing driveway on the west end of the existing developed portion of the park site. The DSEIR should specifically state that a new driveway access point is proposed as part of this project.

2

- Section 2.4 Grading and Construction Work, Page 2-13 of the DSEIR states that the project will require 14,300 cubic yards of import soil. It is important to note that if there is soil import or export greater than or equal to 10,000 cy and it is to be hauled over roadways within County jurisdiction, a hauling route must be clearly identified and approved by the County. This should be noted in the DSEIR.

3

- There is a Section within the Geology portion of this document entitled □ Los Angeles County Code □ (Page 3.5-9). It states that the grading Code is Chapter 70 of Title 26 of the Los Angeles County Code. This is incorrect. Los Angeles County is currently using the 2008 edition of the Los Angeles County Building Code (LACBC). This code is based upon the 2007 edition of the California Building Code (CBC), with amendments to meet local conditions. Appendix J is the portion of the code that is specifically related to grading.

4

- □ Alternative 2: Revised Site Plan Alternative □ mentions that there is an alternative to the proposed site plan that rotates the buildings 90 degrees, among other things. Any alternate site plans would need to be approved by Land Development Division, Road and Grading Section for review of the site access.

5

If you have any questions regarding traffic/access comments, please contact Matthew Dubiel at (626) 458-4921.

If you have any other questions or require additional information, please contact Toan Duong at (626) 458-4945.

MA:

P:\CEQA\CDMDPW □ STEPHEN SORENSEN COUNTY PARK GYMNASIUM □ DSEIR.doc

bc: Geotechnical and Materials Engineering (Wan)

Responses to Comment Letter 4 □

County of Los Angeles Department of Public Works □

Land Development Division

Response 4-1:

The comment is noted. The three additional geotechnical reports referenced in the comment letter are available for review at the County of Los Angeles Department of Public Works, Alhambra office.

Response 4-2:

The comment is noted. Changes to the text have been incorporated to reflect the installation of the new driveway west of the existing access driveways. The sentence has been reworded to acknowledge commenter's statements and to clarify this component of the proposed project. Please see Chapter 3, Revisions to the Draft EIR, Project Description and Section 3.11 Transportation and Traffic for additional details. The modification to the text is as follows:

Access to the proposed Gymnasium/Community Building Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. ~~No~~ One new driveway access points ~~to~~ adjacent to East Avenue P is ~~streets are~~ proposed.

Response 4-3:

The exact hauling route has not yet been identified given that the import location has not been determined. The successful bidder will determine the import location and coordinate with the County to identify and approve the hauling route. The hauling route will be clearly identified and approved by the County prior to any soil import.

Response 4-4:

ESA coordinated with the County of Los Angeles, Department of Public Works regarding the questions raised about the date of the Building Code cited within the Draft EIR. The County responded that "the project was designed and approved under the 2002 edition Los Angeles County Building Code, not the 2008 edition."

Response 4-5:

CEQA requires that an EIR compare the effects of a "reasonable range of alternatives" to the effects of the proposed project. The Draft EIR sets forth only those alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation (CEQA Guidelines Section 15126.6[f]). The Draft EIR briefly describes the rationale for selection and/ or rejection of alternatives. The Revised Site Plan alternative presented evaluated the proposed project's impacts against the impacts from the alternative and was analyzed to comply with CEQA. The Revised Site Plan alternative specific site plan was not adopted given that this alternative would have an increased impact on the environment. The proposed site plan (proposed project), shown on the drawings, was reviewed and approved by the required jurisdictional agencies.

CHAPTER 5

Mitigation Monitoring and Reporting Program

Pursuant to Section 21081.6 of the Public Resources Code and the State *CEQA Guidelines* Section 15097, a lead agency is required to adopt a mitigation monitoring or reporting program for assessing and ensuring compliance with the required mitigation measures applied to a proposed project for which an EIR has been prepared. As stated in the Public Resources Code:

The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. . . .

Section 21081.6 provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined prior to final certification of the EIR. The lead agency may delegate reporting or monitoring responsibilities to another public agency or a private entity, which accepts delegations. The lead agency, however, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the program.

The Mitigation Monitoring and Reporting Program table below lists mitigation measures that are required to reduce the significant effects of the proposed project. These measures may also be included in the project's conditions of approval. To ensure that the mitigation measures are properly implemented, a monitoring and reporting program has been devised that identifies the timing and responsible entity for monitoring implementation of each mitigation measure. As shown, the County will have the primary responsibility for implementing these mitigation measures, and various public agencies will have the primary responsibility for enforcing, monitoring, and reporting the implementation of the mitigation measures.

In order to sufficiently track and document the status of mitigation measures, the mitigation monitoring and reporting program below has been prepared with the following components:

- Mitigation measure(s);
- Monitoring phase and action;
- Review agency;
- Enforcement action and responsible agency;
- Action Indicating Compliance; and
- Verification of Compliance (for use during reporting/monitoring).

Information pertaining to compliance with mitigation measures will be documented in the verification of compliance portion of the matrix. The mitigation measure matrix is provided below.

The County of Los Angeles Department of Public Works shall be “...*the custodian* of [this MMRP and] *the documents or other materials which constitute the record of proceedings upon which its decision is based.*” (CEQA Guidelines Section 2181.6(a)(2).)

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
Aesthetics						
AES-1: Lighting. All on-site lighting shall be designed to cast light downward, in the immediate vicinity of the light post or bollard. Lighting shall be placed and designed to avoid light spillage beyond the limits of the park.	Pre-Construction Plan Inspection	County of Los Angeles	Before issuance of Building Permits/ Finalized Site Plan verification and sign-off by the County of Los Angeles			
AES-2: Glare. To reduce any potential glare from project headlights to a less-than-significant level, all new parking lot areas adjacent to Avenue P shall include a block wall at a height that exceeds the level of vehicle headlights.	Pre-Construction Plan Inspection	County of Los Angeles	Before issuance of Building Permits/ Finalized Site Plan verification and sign-off by County of Los Angeles			
Air Quality						
AIR 1a: Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications.	Pre-Construction and Ongoing during Construction	County of Los Angeles	Periodic Compliance Reporting/ AVAQMD			
AIR 1b: Applicant shall ensure that contractors maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions.	Ongoing during Construction	County of Los Angeles	Periodic Compliance Reporting/ AVAQMD			
AIR 1c: Wheel washers shall be installed where vehicles exit the construction site onto paved roads.	Ongoing during Construction	County of Los Angeles	Periodic Inspections/ AVAQMD			
AIR 1d: Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.	Ongoing during Construction	County of Los Angeles	Periodic Inspections/ AVAQMD			
Biological Resources						
BIO -1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit.	Pre-Construction	County of Los Angeles	Grading Permit/ CDFG			

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. If, however, during the preconstruction survey for terrestrial animals desert tortoise are encountered, a take permit would first be obtained and consultation with CDFG and USFWS would occur before the terrestrial species were moved off-site to areas with similar habitat condition. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction so that a take may be avoided.						
<p>BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present. If any burrowing owls are identified, occupied burrows (including a minimum 250-foot non-disturbance buffer zone around any occupied burrow) shall not be disturbed during the nesting season (February 1 through August 31 for owls). The size of the non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.</p> <p>If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County shall adhere to the CBOC guidelines regarding burrowing owls. The proposed mitigation will follow the CBOC guidelines for mitigation and can include land mitigation and/ or passive mitigation among others. If land mitigation is determined to be required, the County would adhere to the habitat mitigation acquisition ratios in the CBOC guidelines and would enter into an agreement with CDFG regarding the amount of land mitigation based on specific criteria. Alternatively, passive relocation will include consultation and approval from the CDFG and the County before implementation. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a</p>	Pre-Construction	County of Los Angeles	Prior to the commencement of grading activities and the issuance of a Grading Permit/ CDFG			

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
<p>minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:</p> <p>Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation..</p>						
<p>BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 2:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (<i>Spermophilus mohavensis</i>). The agreed upon 2:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.</p> <p>Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 2:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.</p>	Pre-Construction	County of Los Angeles	Prior to the commencement of grading activities and the issuance of a Grading Permit/ CDFG			

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
BIO-4: Southern Grasshopper Mouse. Preconstruction surveys for the southern grasshopper mouse shall occur prior to ground disturbing activities. Five consecutive nighttime trapping surveys shall be conducted by a qualified biologist. If southern grasshopper mice are trapped, they shall be relocated to a nearby location containing suitable habitat. Trapping techniques and methodology, and release locations shall be coordinated with the CDFG prior to initiating surveys. A completion letter shall be prepared and submitted to the County and the CDFG within 30 days following the completion of trapping surveys.	Pre-Construction	County of Los Angeles	Prior to the commencement of grading activities and the issuance of a Grading Permit/ CDFG			
<p>BIO-5: Nesting Resident and/or Migratory Birds including Raptors. Within 30 days of any project ground disturbing or vegetation removal actions during the nesting season (February 1 through August 31), the County shall have a qualified biologist conduct a pre-construction nesting bird and survey. The biologist shall be qualified to determine the status and stage of nesting efforts by resident and/or migratory birds including locally breeding raptor species without causing intrusive disturbance. This survey should cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.</p> <p>If an active nesting effort is confirmed or considered likely by the biologist, the nest site shall be avoided and a non-disturbance buffer zone established by the biologist and approved by the County in consultation with the CDFG. The nest site avoidance and non-disturbance buffer zone shall be maintained until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist. If nest avoidance is not feasible, then the County shall obtain the necessary permits or authorizations from the USFWS and/or CDFG to impact the nesting effort that could require taking the young nestlings to a qualified wildlife rehabilitation center.</p>	Pre-Construction	County of Los Angeles	Prior to the commencement of grading activities and the issuance of a Grading Permit/ CDFG			
Cultural Resources						
CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment (i.e., for grading, excavation, trenching). The monitors' objectives	Construction	County of Los Angeles	Periodic Compliance Reporting During Construction/ Qualified Archeologist/ County of Los Angeles			

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.						
CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist and a qualified paleontologist shall provide a mandatory cultural resource orientation to all construction personnel (i.e., those personnel associated with earth-moving equipment and activities) working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.	Pre-Construction	County of Los Angeles	Compliance Reporting/ Qualified Archeologist and Qualified Paleontologist/ County of Los Angeles			
CUL-3: Exposure of Previously Unidentified Paleontological Resources: In the event that paleontological resources are discovered, the County shall notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in <i>CEQA Guidelines</i> Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the County determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted for review and approval prior to implementation.	Construction	County of Los Angeles	Periodic Compliance Reporting During Construction/ Report of Findings and Inventory/ Qualified Paleontologist/ County of Los Angeles			
CUL-4: Exposure of Previously Unidentified Human Remains. In concert with Measures CUL-1 and CUL-2, mitigation for	Construction	County of	Periodic Compliance			

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
exposure of previously unidentified human remains is as follows - if human remains are found, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the county Coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American who will then serve as consultant on how to proceed with the remains (e.g. avoidance, reburial).		Los Angeles	Reporting During Construction/ Report of Findings and Inventory/ County Coroner			
Geology						
GEO-1: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. Site specific geotechnical investigations and or recommendations shall be prepared for the approved gymnasium and other associated facilities. Prior to final building approvals, geotechnical engineering recommendations regarding mitigation and reduction of seismic hazards for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ¹ The purpose of these guidelines is to protect the public safety from seismic effects.	Pre-Construction	County of Los Angeles	Report of Findings; Issuance of Grading Permit/ Licensed Geotechnical Engineer /County of Los Angeles			
GEO-2: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. The project applicant shall prepare a site specific, design level geotechnical investigation for the approved project to determine the particular project designs and provide site specific engineering recommendations for mitigation of liquefiable soils. Liquefiable soils under the conditions described in the geotechnical report shall be mitigated according to the requirements of the Seismic Hazards Mapping Act. Prior to incorporation into the project, geotechnical engineering recommendations regarding the mitigation and reduction of liquefaction for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ² The purpose of these guidelines	Pre-Construction	County of Los Angeles	Report of Findings; Issuance of Grading Permit/ Licensed Geotechnical Engineer /County of Los Angeles			

¹ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

² Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

Mitigation Measure	Monitoring Phase	Review Agency	Enforcement Action Timing <input type="checkbox"/> Responsible Agency	Verification of Compliance		
				Initials	Date	Remarks
is to protect the public safety from seismic effects such as liquefaction.						
GEO-3: The earthwork and site preparation of the project site, prior to placement of project improvements including foundations, shall include the mitigation of expansive soils in accordance with Section 1805.8 of the 2007 California Building Code (or equivalent within a superseding version if applicable). The recommendations for mitigation of expansive soils shall be made by a California licensed geotechnical engineer or engineering geologist and the approved project will comply with said report.	Pre-Construction/ Construction	County of Los Angeles	Report of Findings; Issuance of Grading Permit/ Licensed Geotechnical Engineer/County of Los Angeles			
Noise						
NOI-1: Construction Operation Hours and Noticing. Project construction will be limited to between the hours of 7:00 a.m. and 4:00 p.m. (which is reduced from the normally allowable Los Angeles County construction hours of 7:00 a.m. and 7:00 p.m.). Signs shall be posted on-site informing neighbors of the duration and hours of the construction activities.	Construction	County of Los Angeles	County of Los Angeles			
NOI-2: Construction Equipment Maintenance. All on-site construction equipment shall be inspected weekly by the contractor to ensure that they have properly operating mufflers and are in good operating condition.	Construction	County of Los Angeles	County of Los Angeles			
NOI-3: Construction Staging Areas. All construction staging areas will be as far away as is practical from the nearest homes. Construction staging will occur adjacent to the area of grading in the proposed parking lot area, which is no closer than 250 feet from the nearest sensitive noise receptors. The staging for construction of the Gymnasium/Community Building will occur on the proposed parking lot area of the site. Staging for the parking lot will occur on other open areas of the park.	Construction	County of Los Angeles	County of Los Angeles			
Utilities						
UTL-1: Landscaped area shall be designed with drought tolerant species. Planting beds shall be heavily mulched in accordance with water-conserving landscape design practices.	Pre-Construction/ Construction	County of Los Angeles	Plan Check/ County of Los Angeles			

STEPHEN SORENSEN COUNTY PARK, GYMNASIUM/ COMMUNITY BUILDING PROJECT

Draft Environmental Impact Report/
Environmental Assessment

Prepared for
County of Los Angeles
Department of Public Works

July 2009



STEPHEN SORENSEN COUNTY PARK, GYMNASIUM/ COMMUNITY BUILDING PROJECT

Draft Environmental Impact Report/
Environmental Assessment

Prepared for
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July 2009

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EXECUTIVE SUMMARY

A. Introduction

This Draft EIR/EA (State Clearinghouse, SCH# 2008061091) has been prepared in conformance with state of California and the California Environmental Quality Act (CEQA) and *CEQA Guidelines*.¹

B. Project Description

The County of Los Angeles is proposing Gymnasium/Community Building park improvements on approximately 3.0 acres of land within the 100-acre Stephen Sorensen County Park. Stephen Sorensen County Park is located in the unincorporated community of Lake Los Angeles in northern Los Angeles County, California at 16801 East Avenue P, approximately 15 miles east of the City of Palmdale. The proposed Gymnasium/Community Building improvements consist of a combined gymnasium and community building (with a multi-purpose room and a classroom), an expanded parking lot area with 57 new parking spaces, landscaping, irrigation and security lighting. As the project will provide community-serving facilities, a priority has been placed on encouraging community involvement and the proposed project design was revised to include feasible suggestions from the citizens. Please see Chapter 2.0, Project Description, for a full description of the proposed project.

Project Objectives

The applicant's objectives for the project include the following:

- Expand an existing park and fully meet Americans with Disabilities Act (ADA) requirements for buildings, including restroom facilities, walkways, and a parking lot;
- Provide a quality, up-to-date recreational facility that meets the growing demands of the community;
- Respond to the need for expanded and enhanced community recreational amenities; and
- Maintain and enhance open space and recreational opportunities within the County of Los Angeles.

¹ CEQA Statute, Public Resources Code (PRC) Division 13, Chapter 1, §21000 et al., 2007; CEQA Guidelines, California Code of Regulations (CCR), Title 14, Chapter 3, §15378, 2007.

Approvals and Intended Uses of the EIR

This CEQA documentation applies to all lead and responsible agencies, and all project discretionary and ministerial approvals, including but not limited to those identified below.

Lead Agencies

- US Dept of Housing and Urban Development (HUD) (EA; project funding).
- Los Angeles County, including the following entities:
 - Los Angeles Community Development Commission, (coordination and procurement of HUD funds).
 - Los Angeles County Department of Public Works, Building and Safety Division (EIR lead, as well as approval of building permits, grading permits and construction monitoring).
 - Los Angeles County Department of Parks and Recreation (project review and environmental review).
 - Los Angeles County Department of Regional Planning (plot plan review and approval).
 - Sanitation District of Los Angeles County (approval of project wastewater disposal plan).
 - Los Angeles County Fire Department (review of site plan for access issues).
 - Los Angeles County Board of Supervisors certification of this EIR and approval for advertising/bidding of project construction work.

Responsible Agencies □Trustee Agencies

- US Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), permitting (including mitigation) for presumed Mojave Ground Squirrel impacts.
- South Coast Air Quality Management District (review of CEQA documentation); Rule 403 applicable for reduction of dust during grading).
- Los Angeles Regional Water Quality Control Board (Compliance with County National Pollutant Discharge Elimination System (NPDES) Permit; Standard Urban Storm Water Mitigation Plan (SUSMP); and Project Storm Water Pollution Prevention Plan (SWPPP review)).

Cumulative Projects

Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present and reasonably foreseeable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines Section 15130(b), “the discussion of cumulative impacts shall reflect the severity of the impacts, and their likelihood of occurrence, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone.”

Therefore, the cumulative discussion in this EIR focuses on whether the impacts of the proposed project are cumulatively considerable within the context of impacts caused by other past, present, or reasonably foreseeable future projects. Cumulative projects (also known as related projects) in

Los Angeles County are defined as development projects that are planned or reasonably foreseeable in the proposed project area, which also may be in various stages of the application and approval process, but are not yet operational. Cumulative impact discussions for each issue area are provided in the technical analysis contained within Chapter 3.0.

The potential for cumulative impacts to occur from the proposed project could include, but is not limited to:

- Within local context: development of the proposed project in conjunction with other project in the nearby area could result in locally significant impacts (e.g., construction related impacts).
- Within the regional context: development of the proposed project in conjunction with other projects could result in regionally significant impacts (e.g., air quality).

For local impacts, there are no cumulative (related) projects that are relevant to the proposed project and project site. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area². Based on the list provided, there are no related projects within a five mile radius of the proposed project.

C. Environmental Impacts and Mitigation Measures

The potential environmental impacts of the project are summarized in **Table ES-1** at the end of this chapter. This table lists impacts and mitigation measures in three impact categories: no impact, less than significant impact, and less than significant impact with mitigation. For this project, no impacts were found to be significant after the implementation of mitigation measures with the exception of cumulative air quality. For each significant impact, the table includes a summary of the mitigation measure(s) and an indication of whether the impact would be mitigated to a less than significant level. Please refer to Chapter 3, Environmental Setting, Impacts, and Mitigation, for a complete discussion of each impact and associated mitigation measures.

D. Alternatives

The California Environmental Quality Act requires that a reasonable range of project alternatives be discussed in an Environmental Impact Report. An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible and which are infeasible, therefore providing merit to in-depth consideration for those selected for additional analysis. After consideration of various alternatives, the following were selected for evaluation: the No Project Alternative, and Revised Site Plan Alternative. These alternatives were selected for their potential to reduce project impacts, particularly significant project impacts. It is noted that all project impacts are reduced to

² Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

less than significant with mitigation (with the exception of cumulative green house gases); therefore, the proposed alternatives were selected in order to further reduce these impacts.

As noted earlier, the purpose of alternatives is to explore ways to avoid or substantially lessen any of the significant effects of the proposed project.

Alternative 1: No Project □ No Build Alternative

The *CEQA Guidelines* (Section 16126.6(e)) provides the following guidance on the No Project Alternative, “for ...a development project on identifiable property, the “no project” alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved.”

Under this alternative, no increase in impacts would occur, and all impacts of the project would be avoided (aesthetics, air quality, biological resources, cultural resources, geology, hydrology, land use, noise, public services, and transportation/ traffic). However, the No Project Alternative would not meet many any of the project objectives.

Alternative 2: Revised Site Plan Alternative

Alternative 2 would provide an alternative site plan. This Alternative was chosen based upon the Planning Study conducted for the entire (100 acres) Park. The purpose of the Planning Study was to determine identify potential land use constraints and identify the most suitable land areas for development. The Planning Study was intended to assist the County of Los Angeles, Department of Public Works (LACDPW or County) staff with the future planning at the site. The analysis assesses the following resources: biological resources, cultural resources, geologic hazards, hazardous materials, hydrology, land use, the local transportation network, and utilities (including septic leach field capacity). This Planning Study assessed the feasibility, constraints, and opportunities for the future full development of Stephen Sorensen County Park that would encompass the entire 100-acre site. Based on the results of the study, it was determined that the majority of the 100-acre site contained high constraints for development (i.e. was within the 100 year flood plane, had significant cultural resources, etc.). Thus, the most suitable remaining undeveloped portion of the 100-acre park is the proposed 3.0 acre site.

Alternative 2 would provide an alternative site plan for the park site. The same project site and improvements would be proposed; however, the angle of the Gymnasium/Community Building would be rotated 90 degrees. This alternative requires significantly more grading, has a larger overall footprint of disturbance, but provides for a lower profile when viewed from Avenue P and from the nearby residences to the south of the park. It would also encroach into the 100-year flood plain, requiring that the foundation be raised above the 100-year flood level. The proposed project provides for adequate distance above the 100-year flood level, also, but the proposed Gymnasium/Community Building would sit at the same grade as the hardscape (walkways and parking lots) surrounding it.

Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative. In addition, the *CEQA Guidelines* (Section 15126.6(e)(2)) require that, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Project Alternative would result in the least environmental impacts. Next to the No Project Alternative, and the Proposed Project would have the least impacts to the environment. After the No Project Alternative and the Proposed Project, the Revised Site Plan Alternative is the alternative that would have the least impacts, and therefore is the environmentally superior alternative; however its impacts are virtually the same as the proposed project's. Given the constraints provided in the previous planning analysis for the entire Stephen Sorensen County Park (Appendix B of this EIR), improved alternatives for the proposed project site and site plan are not available. The proposed project was selected over the alternatives as the proposed project would avoid additional impacts to biological resources, cultural resources, and it would avoid the flood zone. Additional, the proposed project would have a reduced cost as compared to the alternative.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
3.1: Aesthetics		
Impact 3.1.1: The proposed project would not have a substantial adverse effect on a scenic vista.	None required.	No mitigation required.
Impact 3.1.2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required.	No mitigation required.
Impact 3.1.3: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.	None required.	No mitigation required.
Impact 3.1.4: The proposed project would not create a new source of light or glare which would adversely affect day or nighttime views in the area.	AES-1: Lighting. All on-site lighting shall be designed to cast light downward, in the immediate vicinity of the light post or bollard. Lighting shall be placed and designed to avoid light spillage beyond the limits of the park. AES-2: Glare. To reduce any potential glare from project headlights to a less-than-significant level, all new parking lot areas adjacent to Avenue P shall include a block wall at a height that exceeds the level of vehicle headlights.	Less than significant.
Impact 3.1.5: The proposed project would not result in an adverse cumulative aesthetic impact.	None required.	No mitigation required.
3.2: Air Quality		
Impact 3.2.1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	None required.	No mitigation required.
Impact 3.2.2: Project construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	AIR 1a: Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications. AIR 1b: Applicant shall ensure that contractors maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions. AIR 1c: Wheel washers shall be installed where vehicles exit the construction site onto paved roads. AIR 1d: Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.	Less than significant.
Impact 3.2.3: Project operation would not violate air quality standards or contribute substantially to an existing or projected air quality violation during long-term operation.	None required.	No mitigation required.

**TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.2.4: The project would not conflict with implementation of state goals for reducing greenhouse gas emissions or any other applicable plan, policy or regulation and thereby have a negative effect on Global Climate Change.	None required.	No mitigation required.
Impact 3.2.5: The project would not create objectionable odors affecting a substantial amount of people.	None required.	No mitigation required.
Impact 3.2.6: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) or for greenhouse gas emissions.	None required.	No mitigation required
3.3 Biological Resources		
Impact 3.3.1: The proposed project would not have a substantial adverse affect, either directly or through habitat modifications, on any specie identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	<p>BIO □ 1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction.</p> <p>BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.</p> <p>If any burrowing owls are identified, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31 for owls), including a minimum 250-foot non-disturbance buffer zone around any occupied burrow. The size of non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.</p> <p>If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County shall implement a burrowing owl passive relocation program that shall adhere the CBOC guidelines regarding burrowing owls. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:</p> <p>Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors</p>	Less than significant.

**TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
	<p>should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.</p> <p>BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 1:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (<i>Spermophilus mohavensis</i>). The agreed upon 1:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.</p> <p>Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 1:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to <i>Crokey's cryptantha</i>, if present.</p> <p>BIO-4: Southern Grasshopper Mouse. Preconstruction surveys for the southern grasshopper mouse shall occur prior to ground disturbing activities. Five consecutive nighttime trapping surveys shall be conducted by a qualified biologist. If southern grasshopper mice are trapped, they shall be relocated to a nearby location containing suitable habitat. Trapping techniques and methodology, and release locations shall be coordinated with the CDFG prior to initiating surveys. A completion letter shall be prepared and submitted to the County and the CDFG within 30 days following the completion of trapping surveys.</p> <p>BIO-5: Nesting Resident and/or Migratory Birds including Raptors. Within 30 days of any project ground disturbing or vegetation removal actions during the nesting season (February 1 through August 31), the County shall have a qualified biologist conduct a pre-construction nesting bird and survey. The biologist shall be qualified to determine the status and stage of nesting efforts by resident and/or migratory birds including locally breeding raptor species without causing intrusive disturbance. This survey should cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.</p> <p>If an active nesting effort is confirmed or considered likely by the biologist, the nest site shall be avoided and a non-disturbance buffer zone established by the biologist and approved by the County in consultation with the CDFG. The nest site avoidance and non-disturbance buffer zone shall be maintained until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist. If nest avoidance is not feasible, then the County shall obtain the necessary permits or authorizations from the USFWS and/or CDFG to impact the nesting effort that could require taking the young nestlings to a qualified wildlife rehabilitation center.</p>	

**TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.3.2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	None required.	No mitigation required.
Impact 3.3.3: The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	None required.	No mitigation required.
Impact 3.3.4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Implement Mitigation Measure BIO-1 through BIO-4.	Less than significant.
Impact 3.3.5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None required.	No mitigation required.
Impact 3.3.6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	None required.	No mitigation required.
Impact 3.3.7: The proposed project would not result in adverse cumulatively considerable impacts on biological resources including loss of habitat for native plant and wildlife species.	None required.	No mitigation required.
3.4: Cultural Resources		
Impact 3.4.1: The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.	CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment. The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-	Less than significant.

TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
	<p>disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.</p> <p>CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist shall provide a mandatory cultural resource orientation to all construction personnel working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.</p>	
Impact 3.4.2: The proposed project would not cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.	None required.	No mitigation required.
Impact 3.4.3: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	CUL-3: Exposure of Previously Unidentified Paleontological Resources: In the event that paleontological resources are discovered, the project proponent (depending upon the project component) will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in <i>CEQA Guidelines</i> Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to the project proponent for review and approval prior to implementation.	Less than significant.
Impact 3.4.4: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.	CUL-4: Exposure of Previously Unidentified Human Remains. In concert with Measures CUL-1 and CUL-2, mitigation for exposure of previously unidentified human remains is as follows - if human remains are found, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the county Coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American who will then serve as consultant on how to proceed with the remains (e.g. avoidance, reburial).	Less than significant.
Impact 3.4.5: The proposed project would not significantly impact cultural and historic resources on a cumulative level.	None required.	No mitigation required.

**TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
3.5: Geology		
Impact 3.5.1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, due to strong seismic ground shaking.	GEO-1: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. Site specific geotechnical investigations and or recommendations shall be prepared for the approved gymnasium and other associated facilities. Prior to final building approvals, geotechnical engineering recommendations regarding mitigation and reduction of seismic hazards for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ³ The purpose of these guidelines is to protect the public safety from seismic effects.	Less than significant.
Impact 3.5.2: The proposed project would not be located on a geologic unit that would become unstable, and potentially subside or be damaged by ground failure due to liquefaction.	GEO-2: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. The project applicant shall prepare a site specific, design level geotechnical investigation for the approved project to determine the particular project designs and provide site specific engineering recommendations for mitigation of liquefiable soils. Liquefiable soils under the conditions described in the geotechnical report shall be mitigated according to the requirements of the Seismic Hazards Mapping Act. Prior to incorporation into the project, geotechnical engineering recommendations regarding the mitigation and reduction of liquefaction for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ⁴ The purpose of these guidelines is to protect the public safety from seismic effects such as liquefaction.	Less than significant.
Impact 3.5.3: The proposed project would not be located on expansive soils, potentially damaging foundations and thereby creating substantial risks to life or property.	GEO-3: The earthwork and site preparation of the project site, prior to placement of project improvements including foundations, shall include the mitigation of expansive soils in accordance with Section 1805.8 of the 2007 California Building Code (or equivalent within a superseding version if applicable). The recommendations for mitigation of expansive soils shall be made by a California licensed geotechnical engineer or engineering geologist and the approved project will comply with said report.	Less than significant.
Impact 3.5.4: The proposed project construction activities would not result in substantial soil erosion or the loss of topsoil.	None Required.	No mitigation required.
Impact 3.5.5: The proposed project site would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems	None required.	No mitigation required.
Impact 3.5.6: The proposed project would not result in adverse cumulatively considerable geology, soils, and seismicity impact.	None required.	No mitigation required.

³ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

⁴ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
3.6 Hazards and Hazardous Materials		
Impact 3.6-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	None required.	No mitigation required.
Impact 3.6-2: The proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	None required.	No mitigation required.
Impact 3.6-3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required.	No mitigation required.
Impact 3.6.4: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	None required.	No mitigation required.
Impact 3.6.5: The proposed project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.	None required.	No mitigation required.
Impact 3.6.6: The proposed project would not be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area.	None required.	No mitigation required.
Impact 3.6.7: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required.	No mitigation required.
Impact 3.6.8: The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	None required.	No mitigation required.

TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.6.9: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials on a cumulative level.	None required.	No mitigation required.
3.7 Hydrology		
Impact 3.7.1: Construction activities associated with development of the project would not result in impacts on surface water quality through increased sedimentation in stormwater runoff. In addition, development of the project site could result in increased nonpoint source pollution in stormwater runoff during operation.	None required.	No mitigation required.
Impact 3.7.2: The proposed development would not result in a net increase in impervious surfaces which would reduce the amount of area available for groundwater recharge thereby impacting available groundwater supplies.	None required.	No mitigation required.
Impact 3.7.3: Project development would not increase impervious surfaces which could cause peak runoff to exceed to drainage capacities and cause flooding on or off site	None required.	No mitigation required.
Impact 3.7.4: The proposed project would not result in adverse cumulatively considerable hydrology or water quality impacts.	None required.	No mitigation required.
3.8: Land Use and Planning		
Impact 3.8.1: The proposed project would not physically divide an established community.	None required.	No mitigation required.
Impact 3.8.2: The proposed project would not conflict with applicable land use plans, policies or regulations of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	None required.	No mitigation required.
Impact 3.8.3: The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan.	None required.	No mitigation required.

TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.8.4: The proposed project would not contribute to an adverse cumulative land use impact.	None required.	No mitigation required.
3.9: Noise		
Impact 3.9.1: Activities associated with the construction of the proposed project would not result in the generation of noise, which potentially could adversely affect adjacent sensitive receptors (e.g., residences).	<p>NOI-1: Construction Operation Hours and Noticing. Project construction will be limited to between the hours of 7:00 a.m. and 4:00 p.m. (which is reduced from the normally allowable Los Angeles County construction hours of 7:00 a.m. and 7:00 p.m.). Signs shall be posted on-site informing neighbors of the duration and hours of the construction activities.</p> <p>NOI-2: Construction Equipment Maintenance. All on-site construction equipment shall be inspected weekly by the contractor to ensure that they have properly operating mufflers and that are in good operating condition.</p> <p>NOI-3: Construction Staging Areas. All construction staging areas will be as far away as is practical from the nearest homes. Construction staging will occur adjacent to the area of grading in the proposed parking lot area, which is no closer than 250 feet from the nearest sensitive noise receptors. The staging for construction of the Gymnasium/Community Building will occur on the proposed parking lot area of the site. Staging for the parking lot will occur on other open areas of the park.</p>	Less than significant.
Impact 3.9.2: Activities associated with the construction of the proposed project would not result in the generation of ground-borne vibration, which potentially could adversely affect adjacent sensitive receptors.	None required.	No mitigation required.
Impact 3.9.3: Operational noise associated with near- and long-term development of the proposed project would not result in permanent increases in the ambient noise environment.	None required.	No mitigation required.
Impact 3.9.4: Increases in traffic from the project in combination with other development would not result in cumulatively considerable noise increases.	None required.	No mitigation required.
3.10: Public Services		
Impact 3.10.1: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.	None required.	No mitigation required.

TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.10.2: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.	None required.	No mitigation required.
Impact 3.10.3: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools. The construction of which could cause significant environmental impacts.	None required.	No mitigation required.
Impact 3.10.4: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered parks. The construction of which could cause significant environmental impacts.	None required.	No mitigation required.
Impact 3.10.5: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered public facilities. The construction of which could cause significant environmental impacts.	None required.	No mitigation required.
Impact 3.10.6: The proposed project would not result in a substantial cumulative impact to public services.	None required.	No mitigation required.
3.11: Transportation/Traffic		
Impacts 3.11.1 and Impact 3.11.2: The proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) nor would the project exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways.	None required.	No mitigation required.

TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.11.3: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.	None required.	No mitigation required.
Impact 3.11.4: The proposed project would not result in inadequate emergency access.	None required.	No mitigation required.
Impact 3.11.5: The proposed project would not result in inadequate parking capacity.	None required.	No mitigation required.
Impact 3.11.6: The proposed project would not conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnout, bicycle racks).	None required.	No mitigation required.
Impact 3.11.7: Cumulative development would not significantly impact local intersections and street segments in the project vicinity during construction.	None required.	No mitigation required.
3.12: Utilities		
Impact 3.12.1: The project would not conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board.	None required.	No mitigation required.
Impact 3.12.2: The proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	UTL-1: Landscaped area shall be designed with drought tolerant species. Planting beds shall be heavily mulched in accordance with water-conserving landscape design practices.	Less than significant.
Impact 3.12.3: The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.	None required.	No mitigation required.
Impact 3.12.4: The project would have sufficient water supplies available to serve the project from existing entitlements and resources, and would not need new or expanded entitlements.	None required.	No mitigation required.

**TABLE ES-1 (CONT.)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Impact 3.12.5: The proposed project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	None required.	No mitigation required.
Impact 3.12.6: The project would not be served by a landfill that does not have sufficient permitted capacity to accommodate the project's solid waste disposal needs.	None required.	No mitigation required.
Impact 3.12.7: The proposed project would comply with federal, state and local statutes and regulations related to solid waste.	None required.	No mitigation required.
Impact 3.12.8: The proposed project could result in adverse cumulatively considerable impacts to water supply or infrastructure.	None required.	No mitigation required.

CHAPTER 1

Introduction

1.1 Purpose of this Joint Draft Environmental Impact Report □ Environmental Assessment

This joint Draft Environmental Impact Report (DEIR)/ Environmental Assessment (EA) is intended to inform the County of Los Angeles decision makers, trustee and responsible agencies, and the public of the potential physical environmental effects that may result from the construction of with regard to the construction and operation of the proposed Stephen Sorensen County Park, Gymnasium/ Community Building Project on approximately 3.0 acres of land within the 100-acre Stephen Sorensen County Park, located at 16801 East Avenue P, in the unincorporated community of Lake Los Angeles, in northern Los Angeles County. The EIR/EA is thus an information document, intended to disclose to the decision makers, trustee and responsible agencies, and the public the potential impacts of the proposed project. This allows for informed decision-making, including public and agency input.

CEQA Environmental Impact Report

The County of Los Angeles, Department of Public Works (LACDPW) has prepared this Draft EIR pursuant to the applicable provisions of the California Environmental Quality Act (CEQA) and the related implementing guidelines, known as the *CEQA Guidelines*,¹ with regard to the construction and operation of the proposed Stephen Sorensen County Park, Gymnasium/ Community Building Project. As the lead agency, the LACDPW has the “principal responsibility for carrying out or approving a project which may have a significant effect upon the environment” (CEQA Section 21067). The EIR is therefore intended to publicly disclose those impacts that may be significant and adverse, describe possible measures that would mitigate or eliminate such impacts, and describe a range of alternatives to the proposed project.

This proposed project qualifies as a “project” under CEQA and is therefore subject to the requirements of CEQA for environmental review. According to CEQA Section 21065:

“Project” means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

- An activity directly undertaken by any public agency.

¹ CEQA Statute, Public Resources Code (PRC) Division 13, Chapter 1, §21000 et al., 2007; *CEQA Guidelines*, California Code of Regulations (CCR), Title 14, Chapter 3, §15378, 2007.

- An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or public agencies.

The proposed development could result in foreseeable changes to the environment, and requires entitlement approval from the County. These entitlements include certification of the Final EIR, and approval for advertising/bidding of project construction work permit (all approvals are together referred to as “the proposed project”). A detailed description of the project and associated approval requirements are provided in Chapter 2.0, Project Description.

NEPA Environmental Assessment

This document also includes National Environmental Policy Act (NEPA) compliance, in the form of an EA, because NEPA review is required when federal funds are utilized. The with regard to the construction and operation of the proposed Stephen Sorensen County Park, Gymnasium/Community Building Project, federal funds are being provided by the US Department of Housing and Community Development (HUD), administered through a grant to the Community Development Commission of the County of Los Angeles (CDC). These funds are currently being provided for design phase activities, but may additionally be applied towards construction costs.

From the standpoint of NEPA, a project with federal agency involvement that may have significant unavoidable impacts on the environment would require analysis in an Environmental Impact Statement (EIS), the equivalent of an EIR under CEQA. Where mitigation measures are deemed to reduce project impacts to below a significant level, an EA would suffice. An EA under NEPA is roughly equivalent to an MND under CEQA.

1.2 Environmental Review Process

On June 16, 2008, in accordance with CEQA Section 21092, the County published a Notice of Preparation (NOP) of this Draft EIR, and circulated it to governmental agencies, organizations, and persons that may be interested in this project. The NOP requests comments on the scope of the EIR, and asks that those agencies with regulatory authority over any aspect of the project describe that authority. The NOP was circulated for public comment from June 17, 2008 to July 16, 2008. Responses to the NOP are included in this EIR as **Appendix A**.

As the project will provide community-serving facilities, a priority has been placed on community involvement. The County held several community meetings on the project to solicit comments and concerns, and the proposed project design was revised to include suggestions from the citizens, to the extent feasible.

Opportunities will continue to be provided for the public to present comments and concerns regarding the EIR. As required by CEQA, this Draft EIR is being circulated for public review and comment for at least a 45-day period. The review period begins on July 24, 2009 and ends on

September 8, 2009. Written comments should be sent for receipt by the close of business September 8, 2009 at the following address:

Los Angeles County Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803-1331
Attn: Alioune Dioum
ADioum@dpw.lacounty.gov

The Los Angeles County Board of Supervisors will consider the project and this Draft EIR at a public hearing on a date and time to be determined and duly noticed. Written and oral comments will be accepted at that public hearing, and taken into consideration by the decision-makers (i.e., Board of Supervisors). Written responses will be prepared to all relevant comments received during the 45-day review period and at the public hearings and included in the Final EIR.

1.3 Organization of the Draft EIR

As illustrated in **Table 1-1** on the following page, this Draft EIR is organized into six chapters each dealing with a separate aspect of the required content of an EIR as described in the CEQA Guidelines; it is intended for use and reference. To help the reader locate information of particular interest, a brief summary of the contents of each chapter of the EIR is provided.

Executive Summary: This section contains an overview of the proposed project, as well as a summary of the proposed project's environmental impacts, proposed mitigation, level of significance before and after mitigation, and unavoidable impacts. Also contained within this section is a summary description of project alternatives.

Chapter 1. Introduction: This chapter provides an overview of the purpose and use of the EIR, the scope of this EIR, the environmental review process for the EIR and the proposed project, and the general format of the document.

Chapter 2. Project Description: This chapter identifies the project location, summarizes the proposed project and its approval requirements, and outlines the project objectives for the proposed project. Surrounding land uses, as well as cumulative (related) projects are also presented in this chapter.

Chapter 3. Environmental Setting, Impacts and Mitigation Measures: This chapter describes and evaluates each of the environmental issue areas, including the existing environmental setting and background, applicable environmental thresholds, environmental impacts (both short-term and long-term), policy considerations related to the particular environmental issue area under analysis, mitigation measures capable of reducing potentially significant adverse environmental effects, and an analysis of cumulative impacts. Where additional actions must be taken to ensure consistency with environmental policies, mitigation may be provided, where appropriate. A separate section is devoted to Effects Found not to be Significant. This section provides clear reasoning for environmental issues for which the project would clearly have no adverse impact.

**TABLE 1-1
REQUIRED EIR CONTENTS**

Requirement CEQA Guidelines Section	Location in Draft EIR
Table of contents (Section 15122)	Table of Contents
Summary (Section 15123)	Executive Summary
Introduction	Chapter 1
Project description (Section 15124)	Chapters 2 and 3
and environmental setting (Section 15125)	
Significant environmental impacts (Section 15126.2 (a))	Chapter 3 ^a
Unavoidable significant environmental impacts (Section 15126.2 (b))	Chapters 3 and 4 ^a
Mitigation measures (Section 15126.4)	Chapter 3
Mitigation monitoring program (MMP) (CEQA Statue Section 21081.6 (a.1 and b))	Chapter 3 (mitigation measures) □ a complete MMP is to be provided in the Final EIR
Cumulative impacts (Section 15130)	Chapter 2 and Chapter 3
Alternatives to the proposed project (Section 15126.6)	Chapter 5
Other CEQA Considerations/ Growth-inducing impacts (Section 15126.2 (d))	Chapter 4
Effects found not to be significant (Section 15128)	Chapter 3, Section 3.13
NEPA Environmental Assessment	Chapter 3, Section 3.14
Organizations and persons consulted (Section 15129)	Chapter 6
List of preparers (Section 15129)	Chapter 6
Mitigation Monitoring Program Compliance Report	Chapter 7
Notice of Preparation	Appendix A
Notice of Preparation Comments Received	Appendix A

^a Supporting information is provided in the Appendices (B through F), please see Table of Contents.

Chapter 4. Other CEQA Considerations: This chapter provides a summary of the proposed project's potential growth-inducing impacts; provides a list of proposed project impacts that are significant and unavoidable by issue area; and identifies any irreversible changes to the natural environment resulting from the proposed project.

Chapter 5. Alternatives: This chapter analyzes whether there are feasible alternatives to the proposed project that could reduce one or more significant effects, including the No Project Alternative and a Rotated Site Plan Alternative. The chapter also describes other alternatives that were considered but eliminated from further analysis based on failing to meet most of the project objectives, infeasibility, or inability to avoid significant environmental effects.

Chapter 6. Preparers, Organizations and Persons Consulted, References: This chapter identifies the public and private agencies and individuals contacted during, and responsible for the preparation of this report. This chapter also identifies all references used and cited in the preparation of this document.

Appendices: Data supporting the analysis or content of the EIR are provided in the appendices to the document. These include the NOP and responses received technical data, and relevant reports.

CHAPTER 2

Project Description

2.1 Project Background

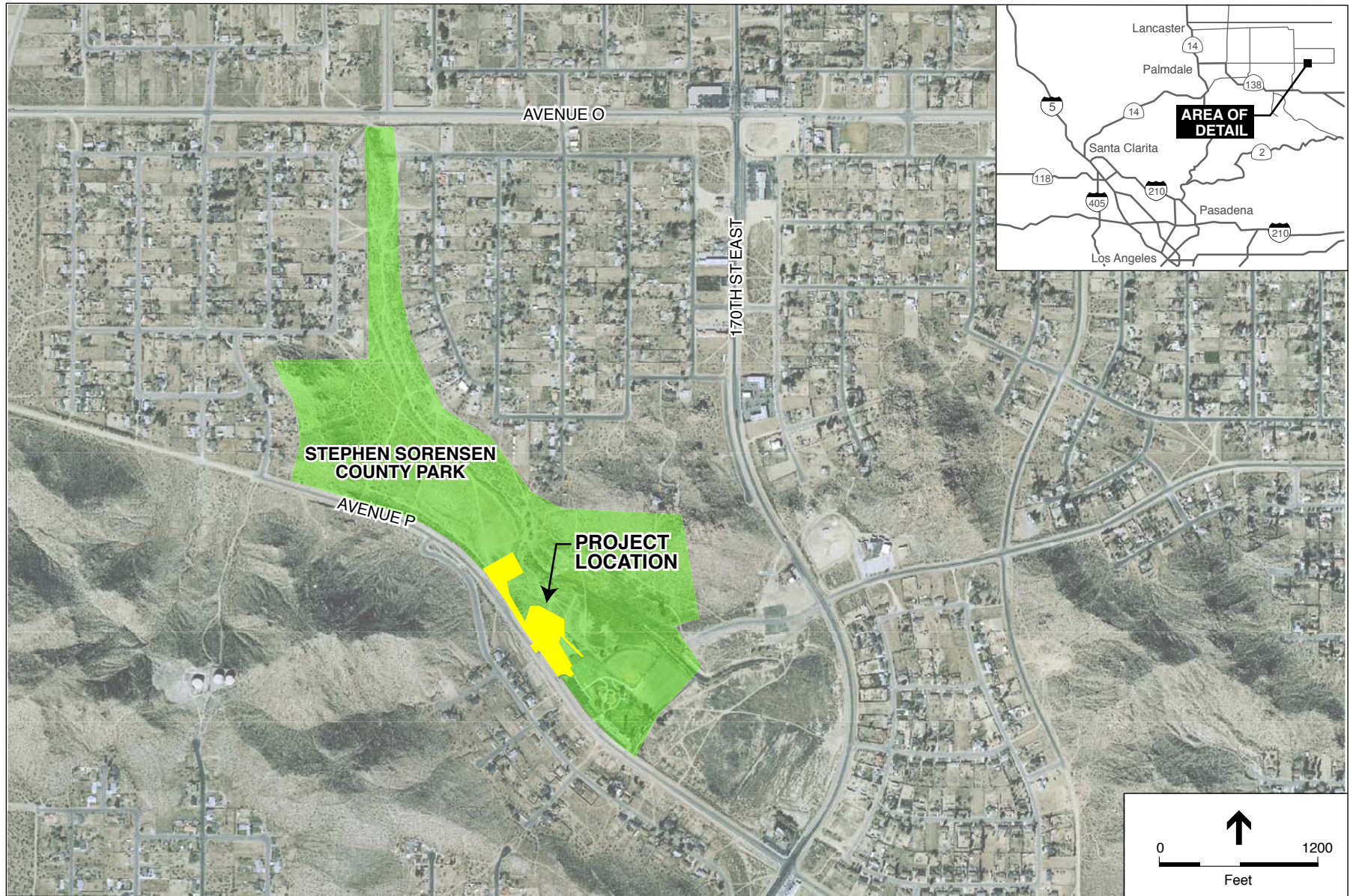
The County of Los Angeles is proposing Gymnasium/Community Building park improvements on approximately 3.0 acres of land within the 100-acre Stephen Sorensen County Park, located at 16801 East Avenue P, in the unincorporated community of Lake Los Angeles, in northern Los Angeles County, California, approximately 15 miles east of the City of Palmdale (see **Figure 2-1, Regional Location, Figure 2-2 Building and Leach Field Site Plan** and **Figure 2-3 Building Site Plan**). Proposed Gymnasium/Community Building improvements consist of a combined gymnasium and community building (with a multi-purpose room and a classroom), an expanded parking lot area with 57 new parking spaces, landscaping, irrigation and security lighting. Previous park improvements that have been constructed to date: 1) a three-acre development that included a children's playground with sand and playground equipment, men's and women's restrooms, and picnic tables in the central-southern portion of the park, and 2) a 12-acre expansion in the southwestern portion of the park, just east of the currently proposed Gymnasium/Community Building improvements, which included lighted basketball courts, baseball diamonds with bleachers, soccer fields, security lighting, landscaping and irrigation, walkways and additional parking.

As the project will provide community-serving facilities, a priority has been placed on community involvement. The County held several community meetings on the project to solicit comments and concerns, and the proposed project design was revised to include suggestions from the citizens, to the extent feasible.

2.2 Project Location and Description

Location

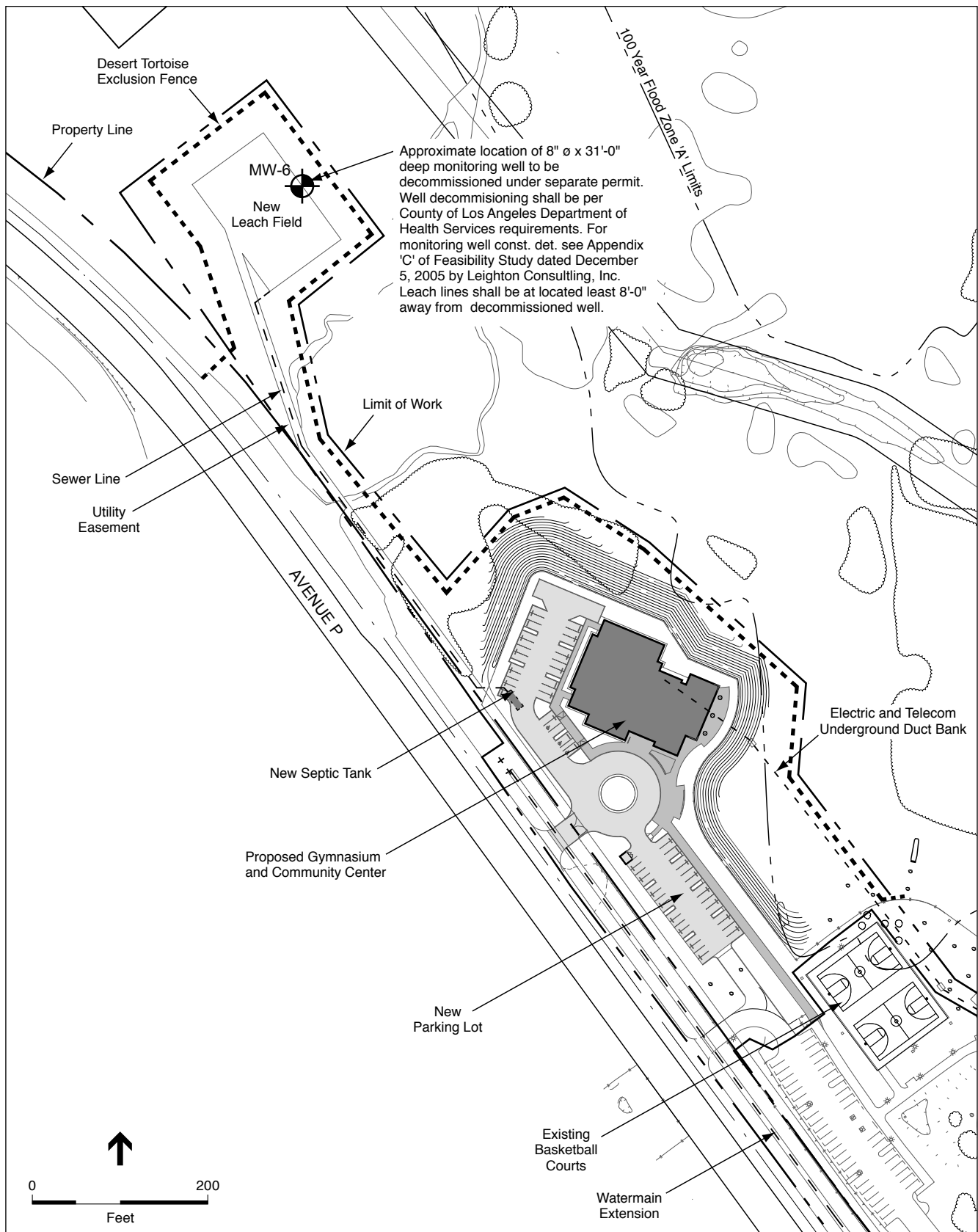
Stephen Sorensen County Park is located in the unincorporated community of Lake Los Angeles in northern Los Angeles County, California. The Assessor's Parcel Number (APN) for the site is 3073-001-902. The 100-acre park site is located at 16801 East Avenue P, approximately 15 miles east of Palmdale (Thomas Bros. Map page 4199, 2009). Local access to the project site is provided from 170th Street East and Avenue P. Regional access to the project site is provided by State Route 138 (SR-138), which is approximately six miles to the south. This highway is a west-east trending highway that connects to SR-14 to the west and to Interstate 15 (I-15) to the southeast.



SOURCE: Street Map USA, 2007.

Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237.01

Figure 2-1
Regional Location



SOURCE: Carde Ten Architects, 2008. Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237.01

Figure 2-2
Building and Leach Field Site Plan

Existing Project Site and Surrounding Land Uses

Photographs of the project site are provided in **Figures 2-4 A, B and C, Site Photos**. In the southeasternmost portion of the park site, previously constructed recreational facilities are visible. The remaining portions of the site are generally undeveloped with rock outcroppings to the west and east and a blue-line ephemeral wash (Lovejoy Springs) that runs the length of the site from the northwest to the southeast. This blue-line ephemeral wash is dry except during heavy winter storms and flash flooding events. Lands that surround Stephen Sorensen County Park are shown in the aerial photograph below (**Figure 2-5 Surrounding Land Uses**) developed with single-family residences to the south, commercial uses further to the east along 170th Street East, and single family residences and undeveloped vacant land to the west and north, some of which contains rock outcrops and foothills. Also, to the north of the site, on North 170th Street East, is the Los Angeles County Fire Department, Fire Station #114, which will service the project site.

Land Use Planning and Zoning for the Site and Surrounding Area

The County General Plan defers to the Antelope Valley Plan for the park's land use designation, which is Open Space (O). According to the Antelope Valley General Plan Land Use Policy map, the land use designations for the Lake Los Angeles area within the vicinity of the site are U-1 and Open Space (O) designated areas, as well as Non-Urban 1 (N-1), Non-Urban 2 (N-2), and Commercial (C) areas.

The C-designated areas are concentrated at the intersection of Avenue O and 170th Street East. The project site is zoned R-A-20000, and surrounding properties are zoned R-3-20U and C-2 to the east, R-3-20U to the south, R-A-20000 within the park to the west and R-A-20000 beyond the park to the west, and R-A-20000 within the park to the north and R-3-20U, RPD-20000-3U, and C-2 beyond the park to the north. The park site lies to the east of Significant Ecological Area (SEA) No. 53 (Lovejoy Butte), according to the currently adopted Los Angeles County General Plan SEA Maps (see Land Use discussion).

2.3 Project Components and Design Features

The main components of the proposed project are illustrated in Figure 2-3, Building Site Plan. The proposed Gymnasium/Community Building improvements are located to the west of the existing park development and to northwest of the existing 94-space parking lot. East Avenue P is located to the south of the project site. The project site is approximately 3.0 acres. Project features consist of an approximately 14,500 square-foot gymnasium with an attached community building that will integrate sustainable green design features, and approximately 28,750 square feet of parking lot with 57 parking spaces, including three handicapped spaces. The County is planning on obtaining the United States Green Building Council's Silver standard under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System (see **Appendix A** for the project's LEED Checklist).¹ All building amenities will

¹ <https://www.usgbc.org/Docs/LEEDdocs/3.4xLEEDRatingSystemJune01.pdf> , accessed on May 29, 2007.

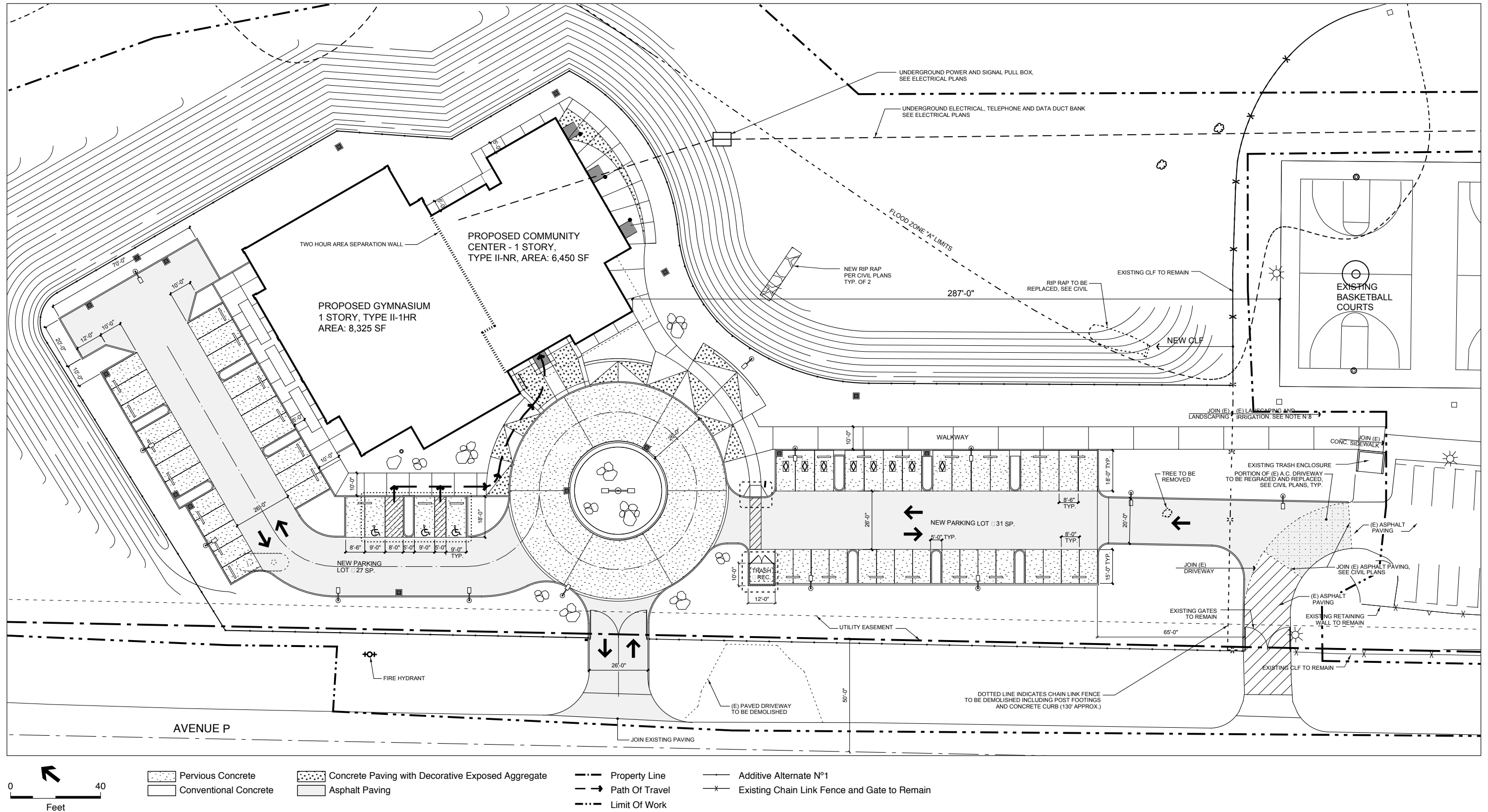
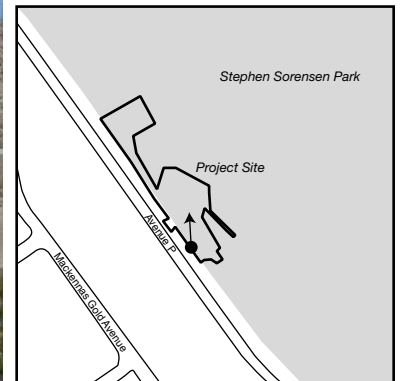


Figure 2-3
Building Site Plan

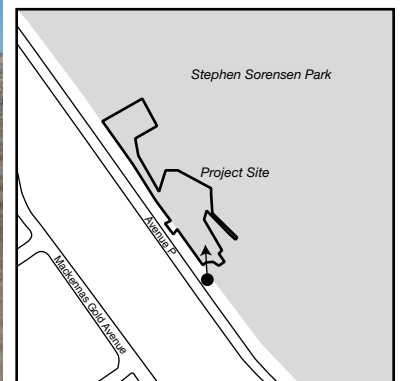
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View of Project Site

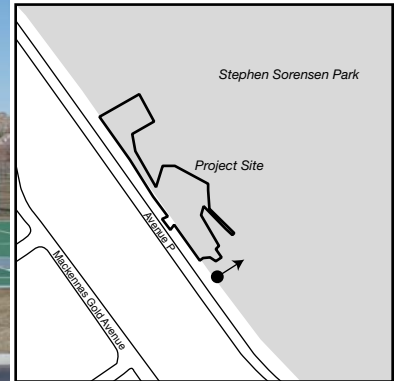


View of Project Site

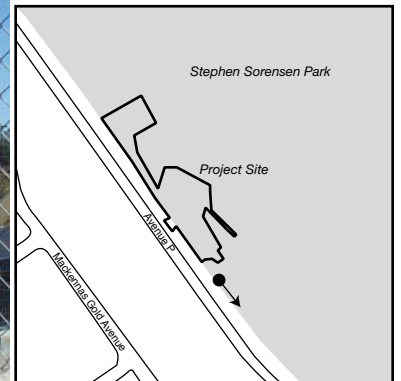




View from south looking north at existing park facilities

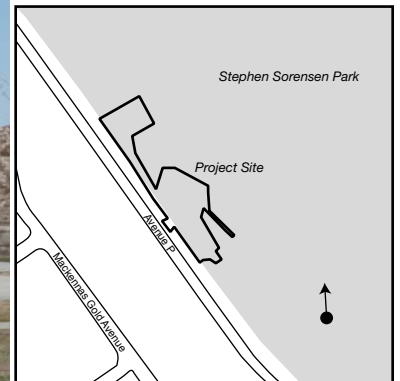


View from south looking north-east at existing park facilities

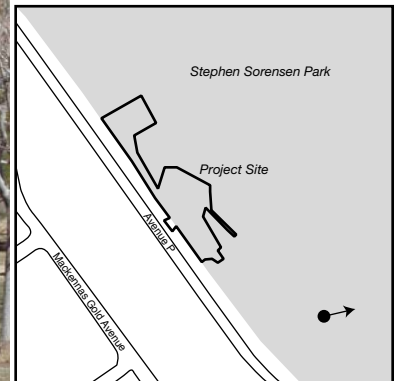


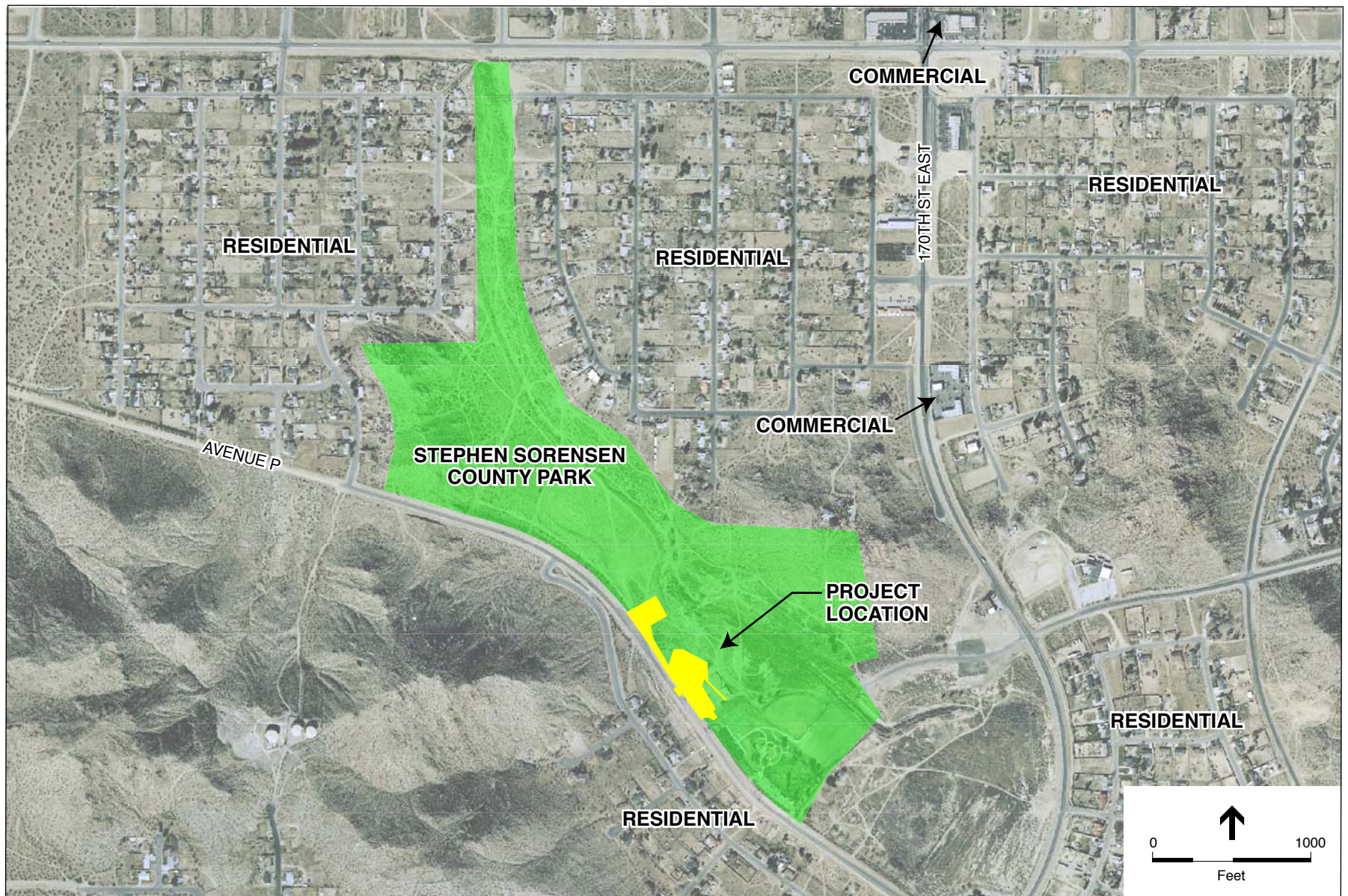


View from east looking west at existing children's play area



View from south looking north at existing park facilities





Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237.01
SOURCE: GlobeXplorer 01-02-2006; Los Angeles County, 2007.

Figure 2-5
Surrounding Land Uses

meet the standards of the Americans with Disabilities Act (ADA). The proposed project consists of three main components: gymnasium and attached community building, site improvements and parking lot, as listed below.

GymnasiumCommunity Building

- A lobby and public counter area;
- Two staff offices;
- Men's and women's restrooms;
- Three-tier bleachers along both sides of the gymnasium;
- A scoreboard for the gym;
- A multi-purpose room measuring approximately 40 feet by 30 feet (1,200 square feet) with folding dividers to create two rooms;
- Custodian, storage and utility rooms;
- A classroom, approximately measuring 40 feet by 20 feet (800 square feet) with computer lab capabilities;
- A full kitchen and a dry food storage area; and
- A civic artwork component.

Site Improvements

- Concrete walkways with pedestrian lighting;
- Site furniture—including benches, and trash receptacles;
- Landscaping and irrigation; and
- Site infrastructure, including on-site water line connections, stormdrain system and solid waste disposal system including leach field.

Parking Lot

- Approximately 28,750 square-foot, 57-space parking lot (including three handicapped spaces);
- Circular drop-off area; and
- Security lighting.

The project facilities would be open from 9:00 a.m. to 10:00 p.m. Monday through Friday, and from 10:00 a.m. to 10:00 p.m. Saturdays and Sundays, except for occasional events where extended hours of operation shall be approved by the Los Angeles County Department of Parks and Recreation (but in no case later than 12:00 midnight). These events would occur up to approximately ten times a year, based on a public decision, and would be posted on-site prior to the event occurrence. These events would occur up to approximately ten times a year.

Energy Conservation

The proposed project does comply with the intent of the CEQA Appendix F policy, which is of increasing concern given the passage of California Global Warming Solutions Act of 2006. The intent of CEQA Appendix F is the following:

- Decrease the overall per capita energy consumption;
- Decrease reliance on natural gas and oil; and
- Increase reliance on renewable energy sources.

As noted above, the County is planning on obtaining the Silver standard under the LEED Green Building Rating System for the proposed Gymnasium/Community Building. This designation requires the efficient use of natural resources. The LEED rating requires that the project take into account the sustainability of the site, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and the innovation and design process. The proposed project would include such LEED-recognized features as water efficient landscaping (which reduces water usage by 50 percent), use of regional materials for construction of the project (10 percent of materials extracted, processed and manufactured are done within the local region), and use of low-emitting materials such as paints, coatings and sealants which promote indoor environmental quality among other features (see Appendix A for further details).

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of greenhouse gas would be progressively reduced, as follows:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020, reduce greenhouse gas emissions to 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32 (AB 32); California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide greenhouse gas emissions are reduced to 1990 levels by 2020 (representing an approximate 25 percent reduction in emissions). The state and local governments are working to find solutions to meet the goals of AB 32. Construction meeting LEED standards is an accepted way of reducing a project's greenhouse gas emissions, as well as other project impacts impact on the environment (e.g., storm water quality, energy usage, etc.). An analysis of greenhouse gas emissions for this project is provided in Chapter 3, under Air Quality.

Access and Parking

Primary access to the park is provided at the intersection of East Avenue P and 170th Street East. Access to the proposed Gymnasium/Community Building Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. No new driveway access points to adjacent streets are proposed. Ninety-four (94) existing parking spaces are located to the south and southeast of the proposed park project. The proposed project includes the addition of 57 parking spaces, for a total of 151 parking spaces provided on-site. The County Department of Regional Planning requires a minimum of 149 parking spaces for all existing plus proposed development at the park (all parking requirements are subject to final plot plan approval by the Los Angeles County Department of Regional Planning and the Los Angeles County Department of Public Works, Building and Safety Division). Existing parking facilities are "over built" for existing facilities, which reduced the total needed for new Gymnasium/Community Building Project parking. Originally it was anticipated that a community building would be part of the previously constructed improvements. However, it was not constructed; thus an overage of parking spaces exists.

2.4 Grading and Construction Work

Construction is scheduled to begin in February 2010, and would occur for approximately 15 months. The first phase of construction will be the survey and grading phase, with duration of approximately three months. Some over-excavation of the site, in the amount of approximately 7,000 cubic yards would be necessary, along with the import of approximately 14,300 cubic yards of soil. The site will be re-graded, resulting in elevations from 1-10 feet above existing topography, but three feet below the adjacent developed portion of the park.

All of the 7,000 cubic yards may be re-utilized on-site, and therefore no export of soil is required. Additional import would be required, up to an additional of 7,000 cubic yards, for a total of 14,300 cubic yards of import. The proposed grading concept is shown in **Figure 2-6, Site Grading Concept**. The plan calls for approximately 41,000 sf of paved areas, including parking, walkways, courtyards and plazas. In order to meet the criteria for a Silver LEED (“Green Building”) rating, no more than 50% of this square footage would be pervious or reflective material. The project’s landscaped areas will total 32,400 sf, which is 24.79 percent of the 3.0-acre project site.

2.5 Project Objectives

The applicant's objectives for the project include the following:

- Expand an existing park and fully meet Americans with Disabilities Act (ADA) requirements for buildings, including restroom facilities, walkways, and a parking lot;
- Provide a quality, up-to-date recreational facility that meets the growing demands of the surrounding community;
- Respond to the need for expanded and enhanced community recreational amenities;
- Maintain and enhance open space and recreational opportunities within the County of Los Angeles; and
- Provide a Community Building/Gym in a public location that provides both passive and active seasonal recreational sports, including basket ball and indoor activities.

2.6 Project Approvals

This CEQA documentation applies to all lead and responsible agencies, and all project discretionary and ministerial approvals, including but not limited to those identified below. Please note that no actual AQMD and RWQCB permits are required for this project. Rather, the EIR contains mitigation measures to ensure the project complies with the requirements of AQMD and RWQCB.

Lead Agencies

- US Dept of Housing and Urban Development (HUD) (is Lead Agency for EA and project funding).
- Los Angeles County, including the following entities (is Lead Agency for CEQA compliance):
 - Los Angeles Community Development Commission, (coordination and procurement of HUD funds).
 - Los Angeles County Department of Public Works, Building and Safety Division (approval of building permits, grading permits and construction monitoring).
 - Los Angeles County Department of Parks and Recreation (project review and environmental review).
 - Los Angeles County Department of Regional Planning (plot plan review and approval).
 - Sanitation District of Los Angeles County (approval of project wastewater disposal plan).
 - Los Angeles County Fire Department (review of site plan for access issues).
 - Los Angeles County Board of Supervisors (certification of this EIR and approval for advertising/bidding of project construction work).

Responsible Agencies / Trustee Agencies

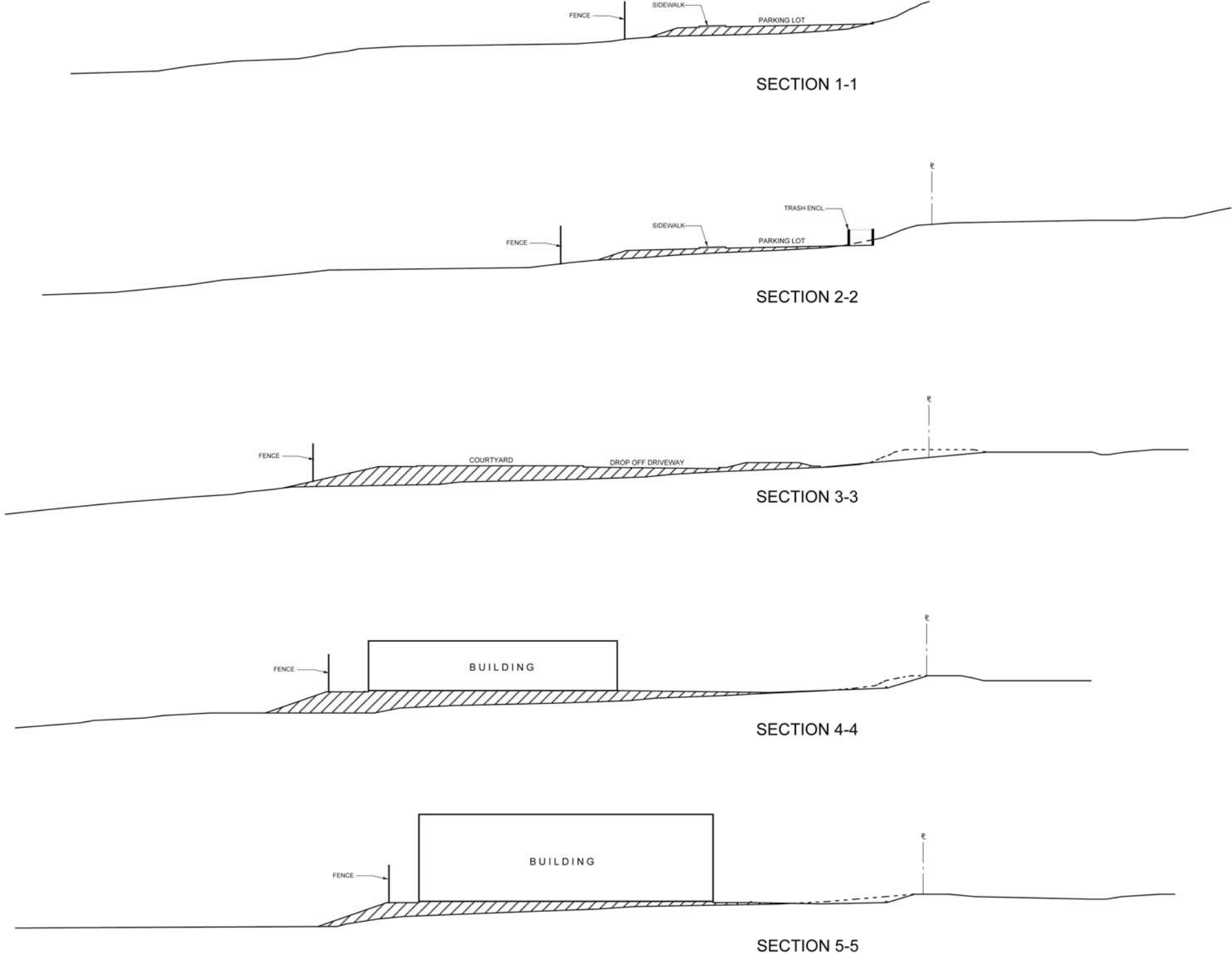
- US Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), permitting (including mitigation) for presumed Mojave Ground Squirrel impacts.
- South Coast Air Quality Management District (review of CEQA documentation); Rule 403 applicable for reduction of dust during grading).
- Los Angeles Regional Water Quality Control Board (Compliance with County National Pollutant Discharge Elimination System (NPDES) Permit; Standard Urban Storm Water Mitigation Plan (SUSMP); and Project Storm Water Pollution Prevention Plan (SWPPP review).

2.7 Cumulative Projects

Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present and reasonably foreseeable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines Section 15130(b), “the discussion of cumulative impacts shall reflect the severity of the impacts, and their likelihood of occurrence, but the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone.”

SORENSEN COUNTY PARK GYMNASIUM
CONCEPT SITE SECTIONS

SCALE 1" = 20'-0"



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According to Section 15355 of the *CEQA Guidelines*,

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- a) The individual effects may be changes resulting from a single project or a number of separate projects.
- b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Therefore, the cumulative discussion in this EIR focuses on whether the impacts of the proposed project are cumulatively considerable within the context of impacts caused by other past, present, or reasonably foreseeable future projects. Cumulative projects (also known as related projects) in Los Angeles County are defined as development projects that are planned or reasonably foreseeable in the proposed project area, which also may be in various stages of the application and approval process, but are not yet operational. Cumulative impact discussions for each issue area are provided in the technical analysis contained within Chapter 3.0.

The potential for cumulative impacts to occur from the proposed project could include, but is not limited to:

- Within local context: development of the proposed project in conjunction with other project in the nearby area could result in locally significant impacts (e.g., construction related impacts).
- Within the regional context: development of the proposed project in conjunction with other projects could result in regionally significant impacts (e.g., air quality).

For local impacts, there are no cumulative (related) projects that are relevant to the proposed project and project site. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area². Based on the list provided, there are no related projects within a five mile radius of the proposed project.

² Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

CHAPTER 3

Environmental Setting, Impacts and Mitigation Measures

This chapter includes an analysis of the following environmental issues in the following order:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services;
- Transportation/Traffic; and
- Utilities.

Each analysis chapter evaluates project impacts on the environment and includes the following key components:

- Environmental Setting;
- Significance Criteria;
- Project Impacts (including project significance conclusions);
- Mitigation Measures (including significance conclusions for the project after implementation of mitigation measures); and
- Cumulative Impacts.

This EIR also includes an Effects Found not to be Significant section. This section follows the above-listed environmental issue sections, and provides a detailed explanation of why further analysis of the following issues is not necessary, due to lack of impacts: Agricultural Resources, Mineral Resources, Population and Housing, and Recreational Resources.

3.1. Aesthetics

3.1.1 Introduction

This section addresses the aesthetic and visual quality impacts associated with the construction and operation of the proposed project. It includes a brief description of the existing visual conditions and an evaluation of potential effects on aesthetic resources and public view corridors.

3.1.2 Environmental Setting

Visual Description and Physical Setting

The proposed project is located in unincorporated Los Angeles County in the community of Lake Los Angeles in the Antelope Valley. The Antelope Valley encompasses approximately 2,400 square miles in northern Los Angeles County, southern Kern County and western San Bernardino County. It is located within the western portion of the Mojave Desert. The area is bordered on the southwest by the San Gabriel Mountains, on the northwest by the Tehachapi Mountains, and on the east by a series of hills and buttes that generally follow the San Bernardino County line. The Antelope Valley is a triangular shaped, topographically closed basin that primarily has a desert climate. Vegetation is typical of the western Mojave Desert that includes creosote and desert shrubs. Certain portions of the valley contain large stands of Joshua Trees. The perimeter of the valley includes low brush covered hills transitioning into the Tehachapi Mountains and San Gabriel Mountains to the west and south.

Project Site/Park Site

The 100-acre Stephen Sorensen County Park site is comprised of a central wash area with a blue-line ephemeral wash (Lovejoy Springs) (which is dry most of the year, except for winter storm and flash flood events), scenic buttes and hillsides, other flatter vacant rocky land, sparse high desert vegetation, and the developed portions of the park. The developed portions of the park consist of various park facilities, including a small men's and women's restroom, basketball courts, ball field with bleachers, walkways, tennis courts, site furniture, pedestrian lighting, landscaping and irrigation. Existing illumination consists of street lighting, basketball court lighting and other on-site safety lighting adjacent to the playground, walkways and restrooms. The proposed project would occur on an approximately 3.0-acre portion of the park that is generally flat and disturbed. Figure 2-4 A in Chapter 2, Project Description, are pictures of the site proposed for development and Figures 2-4, B and C in Chapter 2 show adjacent areas to the site that show the sites existing visual character. All buildings and improvements on-site have been recently constructed (no historic buildings) since 1996.

Surrounding Area

Lands that surround Stephen Sorensen County Park are developed with single-family residences to the south; commercial uses are located further to the east along 170th Street East, and single family residences and undeveloped land to the west and north, some of which contains rock outcrops and foothills.

3.1.3 Regulatory Framework

State of California

State Scenic Highway Program

The California Department of Transportation (Caltrans) administers the State Scenic Highways Program to preserve and protect scenic highway corridors from projects that would diminish the aesthetic value of lands adjacent to highways (Sections 260 *et seq.* of the California Streets and Highways Code). Scenic highway corridors are defined as the land generally adjacent to and visible by motorists from a scenic highway. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

There are no officially designated state scenic highways within the project area.¹

Local

Local governments may establish locally-designated scenic highways, corridors or vistas. Such designations are typically included in the Open Space, Recreation, or Transportation elements of local General Plans.

Los Angeles County General Plan

The Los Angeles County General Plan (1993) is a land use guidance document that includes goals and policies regarding the protection of scenic resources within the County, along with other environmental resources. The General Plan glossary includes the following definition of a Scenic Corridor:

The visible land area outside of the highway right-of-way (to be defined through scenic corridor studies of proposed routes in the Scenic Highway Element).

The General Plan includes the following General Policies:

- Policy 15: Protect areas that have significant natural resources and scenic values, including significant ecological areas, the coastal zone and prime agricultural lands.
- Policy 15: Stress the development of community parks particularly in areas of the greatest deficiency, and take advantage of opportunities to preserve large natural and scenic areas.

¹ California Department of Transportation, California Scenic Highway Mapping System, updated 12-07-2007. Accessed on line June 2008 at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/

The General Plan Scenic Highway Circulation Element describes aesthetic resource goals and policies. Some selected goals and policies are below:

Goal: Preservation and enhancement of aesthetic resources within scenic corridors.

Policy 9: Protect and enhance aesthetic resources within corridors of designated scenic highways.

The Scenic Highway Circulation Element describes scenic corridors. The closest scenic corridor is Avenue O; the scenic portion of Avenue O begins at 165th Street East and continues to 240th Street,² which is 0.75 miles north of the project site at the closest point.

Scenic Resources are described in the Conservation, Open Space and Recreation Element as follows:

The scenic resources in the County include both natural and man-made features. The peaks of the San Gabriel Mountains rise 10,000 feet over the basin, and the waters of the Pacific Ocean and broad sandy beaches define the western margin of the land. Stands of pine, fir, and other evergreens cover the higher slopes of the San Gabriel Mountains. The desert floor of the Antelope Valley is carpeted with fragile wildflowers in the early spring. Buildings designed by notable architects and other buildings of special significance offer outstanding examples of varied urban structures. Other man-made features include historic sculptures in the La Brea tar pits capture an ancient moment to share with the present.

The Land Use Element includes general conditions for development that apply to aesthetic resources. The conditions for land use development within a scenic highway are as follows:

Scenic Highways are identified in the Countywide Circulation Element and include adopted State Scenic highways. Proposed development within all adopted and proposed scenic corridors shall be reviewed for consistency with the following design criteria:

1. The proposed development should be designed to create a consistent visual relationship with surrounding development and with natural terrain and vegetation.
2. Structures and landscaping should complement and enhance scenic views.
3. In possible, potential unsightly features should be located in area not visible from the scenic highway. If this is not feasible, they should be screened by landscaping, fencing, or other appropriate means.
4. Grading should result in final contours which are compatible with the existing grade.

² Personal Communication with Los Angeles Department of Regional Planning, Long Range Planning Division, Bill Cross, May 30, 2007.

5. The number of access roads to or from the scenic highway should be minimized wherever possible, consistent with safety and circulation needs.
6. Watercourses should be preserved in their present condition except where necessary to restore to a state more consistent with a natural appearance.
7. Commercial or industrial uses should be conducted entirely within closed buildings, except for restaurants, recreational uses and gasoline/service stations.
8. Outdoor advertising (billboards, subdivision directional signs, etc.) shall be prohibited.

The Efficient Use of Land goal is as follows:

Goal: To encourage more efficient use of land, compatible with, and sensitive to, natural ecological, scenic, cultural and open space resources.

The General Plan includes policies about the Decision-Making Process. One such policy relevant to aesthetics is as follows:

Policy 25: Establish land use controls that afford effective protection for significant ecological resources, and lands of major scenic value.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. Existing and proposed scenic highways are mapped and shown on the Scenic Highway Element of the County of Los Angeles General Plan. Avenue O is the only nearby scenic highway (a portion is designated as a scenic corridor).

3.1.3 Impacts and Mitigation

Methodology

Aesthetic resources are generally defined as both natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Aesthetic impacts are determined through a comparison to existing characteristics of an area. This section addresses the visual condition of the project site and its vicinity and the potential for the project to adversely affect those conditions. The analysis focuses on the visual character of the project site and views from the surrounding areas. Depending on the extent to which a project's presence would significantly alter the perceived visual character and quality of the environment, aesthetic impacts may occur. The following analysis is based upon CEQA checklist thresholds, research of the County of Los Angeles documents and records, review of project applicant materials, and analysis of the site photo documentation.

Significance Criteria

Using criteria from the *CEQA Guidelines*, the project would be considered to have a significant impact on aesthetic resources if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Project Impacts

Impact 3.1-1: The proposed project would not have a substantial adverse effect on a scenic vista (less than significant).

A scenic vista is generally defined as an expansive, often panoramic view of a valued resource, such as the ocean or a mountain range. Scenic vistas (in a general sense) are limited in the project area due to the surrounding suburban developments built along nearby hillside slopes and ridgelines. While there are no state or locally defined scenic vistas near the site, the site is near a County designated scenic corridor. Avenue O is a scenic corridor; the scenic portion of Avenue O begins at 165th Street East and continues to 240th Street, which is 0.75 miles north of the project site at the closest point.

Development of the proposed Gymnasium/Community Building Project will increase the developed area of the site, adding irrigated grass, trees and flowerbed areas, an enlarged parking lot, walkways and the gymnasium/community building. The proposed development has been designed to be visually compatible with the existing park facilities. The project site is not currently visible from the scenic corridor, as there are intervening natural and suburban features between the site the scenic portion of the roadway. The natural intervening features are vacant undeveloped land including the buttes to the north of the project site (an extension of Lovejoy Buttes, the larger portion of which lie south of the project site). Suburban features include existing residential homes, streets, and landscaping. The gymnasium/community building would be one story, with a high ceiling, for a total of approximately 37 feet in height from final grade. Based on topography available from the United States Geologic Survey (USGS)³, the project would not be highly visible from the scenic corridor; only small glimpses may be visible from small stretches of the corridor, as viewed between view corridors of residential development, but would not obscure views of the buttes to the north, or of the distant mountains as seen from the scenic corridor. Thus, there would be no significant impact to a scenic corridor.

Mitigation Measures: None required.

³ Accessed November 20, 2007, on the following web site: <http://www.topozone.com>

Impact 3.1-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (no impact).

The proposed project area does not include any significant tree, rock outcropping, or historic building scenic resources. The site is generally flat, disturbed, and does not support any scenic resources. Moreover, the site is not located within a state designed scenic highway corridor. Please see Impact 3.1-1 above, there would be no impact.

Mitigation Measures: None required.

Impact 3.1-3: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings (less than significant).

The construction phase of the proposed project would introduce equipment and personnel, which would disturb the existing landscape. This could be perceived as an impact to the visual character or quality of the site; however, these activities would be short-term and would only last during construction. As discussed in Impact 3.1-1 above, less than significant impacts would result to the County designated scenic corridor. In addition, the proposed structure, paved areas and landscaped areas would be visually compatible with the existing park facilities because they would use similar materials (paving and stucco) and similar landscaping (shrubs and trees). The project would be a continuation of the existing well-maintained suburban park. Impacts to the existing visual character and visual quality of the site would be less than significant.

Mitigation Measures: None required.

Impact 3.1-4: The proposed project would not create a new source of light or glare which would adversely affect day or nighttime views in the area (less than significant with mitigation).

The new Gymnasium/Community Building facilities would provide security lighting for walkways, parking and the gymnasium/community building. The new lighting would be consistent in height, design and illumination with existing lighting within the park (existing sports field lighting on the soccer and baseball fields, parking lot lighting and safety lighting around restrooms). To assure that lighting impacts are reduced to a less-than-significant level, a mitigation measure has been included, below. Some additional incremental glare from cars exiting the site along the existing driveway on Avenue P would project southward towards the adjacent residential area. However, homes on the nearest lots are more than 250 feet from the source of the lighting- see Chapter 2, Figure 2-5, Surrounding Land Use, above), and would not be substantially impacted at that distance. In addition, the park buildings are to be closed by 10:00 p.m. Monday through Friday and 10:00 p.m. on Saturday and Sunday (except for infrequent

special events, when they may be open later), limiting ambient nighttime lighting and vehicular glare impacts to the community. Special events may occur up to approximately ten times a year. To assure a less than significant glare impact, a mitigation measure has been included, below. In addition, as the County is planning on obtaining a LEED certified building; the proposed Gymnasium/Community Building would be energy efficient and utilize lighting only where deemed necessary for visibility and safety. Nonetheless, impacts would be significant without mitigation.

Mitigation Measures:

AES-1: Lighting. All on-site lighting shall be designed to cast light downward, in the immediate vicinity of the light post or bollard. Lighting shall be placed and designed to avoid light spillage beyond the limits of the park.

AES -2: Glare. To reduce any potential glare from project headlights to a less-than-significant level, all new parking lot areas adjacent to Avenue P shall include a block wall at a height that exceeds the level of vehicle headlights.

Significance after Mitigation: Less than significant.

Cumulative Impacts

Impact 3.1.5: The proposed project would not result in an adverse cumulative aesthetic impact (less than significant).

Cumulative aesthetic impacts result when several developments within a community combine to create a larger impact. While this project will contribute to urbanized appearance of the existing park, the project would not remove ridgelines or hillsides, nor would it introduce development that would significantly impact a scenic vista. The proposed project would introduce additional recreational facilities to a park site that currently has a recreational/park like appearance. The addition of the proposed project would blend with the existing facilities. Furthermore, this project would incrementally contribute to light and glare impacts on the region. However, the potential light and glare impacts from the proposed project would be reduced by complying with mitigation measures recommended above. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area⁴. Based on the list provided, there are no related projects within a five-mile radius of the proposed project. Any future projects project would be reviewed by the lead agency for potential impacts and required mitigation measures, if any, under CEQA. The proposed projects contribution would not be cumulatively considerable. Cumulative impacts would be less than significant.

Mitigation Measures: None required.

⁴ Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.2 Air Quality

3.2.1 Introduction

This section provides an overview of the existing air quality at the project site and surrounding region, the regulatory framework, an analysis of potential impacts to air quality that would result from implementation of the project, and identification of mitigation measures.

3.2.2 Environmental Setting

Regional Climate

The project is located in Los Angeles County in the western portion of the Mojave Desert Air Basin (MDAB.) The Antelope Valley Air Quality Management District (AVAQMD) is the local air district with jurisdiction over air pollution sources in the project area. The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California Valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. Antelope Valley is bordered on the northwest by the Tehachapi Mountains, separated from the Sierra Nevada Mountains in the north by the Tehachapi Pass (3,800 ft elevation.) The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 ft. elevation).

During the summer, the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation.) The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, to indicate at least three months have maximum average temperatures over 100.4° F.

Existing Air Quality in the Project Vicinity

The AVAQMD maintains a monitoring station within the City of Lancaster that monitor air quality and compliance with associated ambient standards. The monitoring station is located approximately 20 miles from the project site at 43301 Division Street. The following pollutants are monitored at this station: ozone (O₃), particulate matter less than 10 and less than 2.5 microns (PM₁₀ and PM_{2.5} respectively). The most recent published data for the monitoring station are presented in **Table 3.2-1**. In addition, air pollutants of interest to the regulatory agencies for their potential adverse impacts on sensitive receptors are described below.

**TABLE 3.2-1
AMBIENT POLLUTANT LEVELS AT NEARBY MONITORING STATION
AIR QUALITY DATA SUMMARY (2005–2007)**

Pollutant	Standard ^a	Monitoring Data by Year		
		2005	2006	2007
<u>Ozone</u> □ Division Street				
Highest 1 Hour Average (ppm) ^b		0.127	0.123	0.118
Days over State Standard	0.09	42	22	16
Highest 8 Hour Average (ppm) ^b		0.103	0.105	0.101
Days over National Standard	0.08	131	16	14
<u>Particulate Matter (PM10)</u> □ Division Street				
Highest 24 Hour Average (µg/m ³) ^b		47	58	181
Est. Days over State Standard ^c	50	N/A	25.7	18
Highest 24 Hour Average (µg/m ³) ^b □ National Measurement		53	63	188
Est. Days over National Standard ^c	150	0	0	1
State Annual Average (µg/m ³) ^b	20	N/A	25.2	28.3
<u>Particulate Matter (PM2.5)</u> □ Division Street				
Highest 24 Hour Average (µg/m ³) ^b		28	18	25
Days over National Standard	35	0	0	0
State Annual Average (µg/m ³) ^b	12	8.9	7.4	8

a Generally, state standards and national standards are not to be exceeded more than once per year.

b ppm – parts per million; µg/m³ – micrograms per cubic meter.

c PM₁₀ is not measured every day of the year. Number of estimated days over the standard is calculated based on 365 days per year.

NOTES: Values in **bold** are in excess of at least one applicable standard. N/A – Not Available.

SOURCE: California Air Resources Board, 2008a. *Summaries of Air Quality Data*, 2005, 2006, 2007; <http://www.arb.ca.gov/adam/cgi-bin/db2www/polltrends.d2w/start>

Criteria Air Pollutants

Ozone

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROG) and nitrogen oxides (NOx). The time period required for ozone formation allows the reacting compounds to spread over a large area, producing a regional pollution problem. Ozone problems are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once formed, ozone remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth (“rainout”) and absorption by water molecules in clouds that later fall to earth with rain (“washout”).

Carbon Monoxide

Ambient carbon monoxide concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence carbon monoxide concentrations. Under inversion conditions, carbon monoxide concentrations may be distributed more uniformly over an area that may extend some distance from vehicular sources.

When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses.

Carbon monoxide concentrations have declined dramatically in California due to existing controls and programs. Carbon monoxide concentrations are expected to continue declining due to the ongoing retirement of older, more polluting vehicles from the mix of vehicles on the road network.

Particulate Matter (PM10 and PM2.5)

PM10 and PM2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease,

and coughing, bronchitis and respiratory illnesses in children. Recent mortality studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Particulates can also damage materials and reduce visibility. One common source of PM_{2.5} is particulate matter from diesel engines, and diesel particulate matter has been identified as a carcinogen by the state.

Traffic generates particulate matter and PM₁₀ emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM₁₀ can remain in the atmosphere for up to seven days before gravitational settling, rainout and washout remove it.

Nitrogen Dioxide

NO₂ is a reddish brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, nitrogen dioxide can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Greenhouse Gases

Gases that trap heat in the atmosphere are called greenhouse gases. The major concern is that increases in greenhouse gases are causing Global Climate Change. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, most agree that there is a direct link between increased emission of so-called greenhouse gases and long term global temperature. What greenhouse gases have in common is that they allow sunlight to enter the atmosphere, but trap a portion of the outward-bound infrared radiation and warm up the air.

The process is similar to the effect greenhouses have in raising the internal temperature, hence the name greenhouse gases. Both natural processes and human activities emit greenhouse gases. The accumulation of greenhouse gases in the atmosphere regulates the earth's temperature; however, emissions from human activities such as electricity production and motor vehicles have elevated the concentration of greenhouse gases in the atmosphere. This accumulation of greenhouse gases has contributed to an increase in the temperature of the earth's atmosphere and contributed to Global Climate Change. The principal greenhouse gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H₂O). Carbon dioxide is the reference gas for climate change because it gets the most attention and is considered the most important greenhouse gas. To account for the different warming potentials of various greenhouse gases (e.g., if CO₂ has a warming potential is 1, methane by comparison has a warming potential of 23, therefore methane is equal to 23 CO₂E), CO₂ equivalents (CO₂E) are the standard unit that allows for comparing of project that use different ratios of the various greenhouse gases. Large emission sources are reported in million metric tons of CO₂E (MMTCO₂E).

Toxic Air Contaminants (TACs)

Non-criteria air pollutants or TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Diesel particulate matter (DPM) is the most complex of diesel emissions. Diesel particulates, as defined by most emission standards, are sampled from diluted and cooled exhaust gases. This definition includes both solids and liquid material that condenses during the dilution process. The basic fractions of DPM are elemental carbon, heavy hydrocarbons derived from the fuel, and lubricating oil and hydrated sulfuric acid derived from the fuel sulfur. DPM contains a large portion of the polycyclic aromatic hydrocarbons (PAH) found in diesel exhaust. Diesel particulates include small nuclei mode particles of diameters below $0.04\mu\text{m}$ and their agglomerates of diameters up to $1\mu\text{m}$. Ambient exposures to diesel particulates in California are significant fractions of total TAC levels in the state.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

3.2.3 Regulatory Framework

Federal Regulations

The federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (USEPA) to identify National Ambient Air Quality Standards (NAAQS or national standards) to protect public health and welfare. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM₁₀, PM_{2.5}, and lead. **Table 3.2-2** shows current national and state ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant.

Pursuant to the 1990 Federal Clean Air Act Amendments, the USEPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutants, based on whether or not the NAAQS had been achieved. **Table 3.2-3** shows the current attainment status of the project area.

**TABLE 3.2-2
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour 8 hours	0.09 ppm 0.07 ppm ^a	--- 0.08 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide	1 hour Annual Avg.	0.18 ppm 0.030 ppm	--- 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide	1 hour 3 hours 24 hours Annual Avg.	0.25 ppm --- 0.04 ppm ---	--- 0.5 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM-10)	24 hours Annual Avg.	50 µg/m ³ 20 µg/m ³	150 µg/m ³ ---	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter (PM-2.5)	24 hours Annual Avg.	--- 12 µg/m ³	35 µg/m ³ 15 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
Lead	Monthly Ave. Quarterly	1.5 µg/m ³ ---	--- 1.5 µg/m ³	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal Power Plants, Petroleum Production and refining	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).
Sulfates	24 hour	25 µg/m ³	No National Standard	Produced by the reaction in the air of SO ₂ .	Breathing difficulties, aggravates asthma, reduced visibility.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM _{2.5} .

NOTE: ppm □ parts per million; µg/m³ □ micrograms per cubic meter.

^a This concentration was approved by the Air Resources Board on April 28, 2005 and became effective May 17, 2006.

SOURCE: California Air Resources Board, 2008b. *Ambient Air Quality Standards*, available at <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>, March 5, 2008. California Air Resources Board, 2001. *ARB Fact Sheet: Air Pollution*

**TABLE 3.2-3
AVAQMD ATTAINMENT STATUS**

Pollutant	Designation Classification	
	Federal Standards	State Standards
Ozone □ one hour	/a/	Non-attainment
Ozone □ eight hour	Non-attainment	Unclassified
PM10	Unclassified	Non-attainment
PM2.5	Unclassified/attainment	Unclassified
CO	Attainment	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Unclassified
Visibility-Reducing Particles	No Federal Standard	Unclassified
Unclassified: a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment. Attainment: a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a three-year period. Non-attainment: a pollutant is designated nonattainment if there was at least one violation of a state standard for that pollutant in the area.		
^a The federal 1-hour ozone standard was revoked effective June 15, 2005. SOURCES: AV CEQA □ Conformity Guidelines, May 2008.		

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAAA added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all state SIPs to determine if they conform to the mandates of the FCAAA and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

State Regulations

The California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts and regional Air Quality Management Districts. CARB establishes state ambient air quality standards and vehicle emissions standards.

California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. These are shown in Table 3.2-2. Under the California Clean Air Act

(CCAA) patterned after the FCAA, areas have been designated as attainment or nonattainment with respect to the state standards. Table 3.2-3 summarizes the attainment status with California standards in the project area.

California State law defines TACs as air pollutants having carcinogenic effects. A total of 243 substances have been designated as TACs under California law; they include the 189 (federal) Hazardous Air Pollutants (HAPs) adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources but AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. Depending on the risk levels, emitting facilities are required to implement varying levels of risk reduction measures. The proposed project does not include developing facilities that may be categorized as “High-priority,” which are required to perform a health risk assessment.

In August of 1998, CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB, 2000). The document represents a proposal to reduce diesel particulate emissions, with the goal to reduce emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra low sulfur diesel fuel on diesel-fueled engines.

CARB recently published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005). The primary goal in developing the handbook was to provide information that will help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution. The handbook highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities. However, the health risk is greatly reduced with distance. For that reason, CARB provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and sensitive land uses, such as residences.

Greenhouse Gases

Assembly Bill 32 (AB 32)

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that statewide greenhouse gas emissions will be reduced to 1990 levels by 2020.

In December 2007, CARB approved the 2020 emission limit of 427 million metric tons of CO₂ equivalents of greenhouse gases. The 2020 target of 427 million metric tons of CO₂ equivalent (CO₂E) requires the reduction of 169 million metric tons of CO₂E, or approximately 30 percent, from the state’s projected 2020 emissions of 596 million metric tons of CO₂E (business-as-usual).

Also in December 2007, CARB adopted mandatory reporting and verification regulations pursuant to AB 32. The regulations will become effective January 1, 2009, with the first reports covering 2008 emissions. The mandatory reporting regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. Currently, the draft regulation language identifies major facilities as those that generate more than 25,000 metric tons/year of CO₂E. Cement plants, oil refineries, electric-generating facilities/providers, cogeneration facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons/year CO₂E, make up 94 percent of the point source CO₂E emissions in California (CARB, 2007).

In June, 2008, CARB published its *Climate Change Draft Scoping Plan* (CARB, 2008a). The *Climate Change Draft Scoping Plan* reported that CARB met the first milestones set by AB 32 in 2007: developing a list of early actions to begin sharply reducing greenhouse gas emissions; assembling an inventory of historic emissions; and establishing the 2020 emissions limit. After consideration of public comment and further analysis, CARB released the *Climate Change Proposed Scoping Plan* in October, 2008 (CARB, 2008b). The Proposed Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California. Key elements of the Proposed Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation. (CARB, 2008b).

The *Climate Change Proposed Scoping Plan* notes that “[a]fter Board approval of this plan, the measures in it will be developed and adopted through the normal rulemaking process, with public input” (CARB, 2008b).

The *Climate Change Proposed Scoping Plan* states that local governments are “essential partners” in the effort to reduce greenhouse gas emissions, and that they have “broad influence and, in some cases, exclusive jurisdiction” over activities that contribute to greenhouse gas emissions. The plan acknowledges that local governments have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect greenhouse gas emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Many of the proposed measures to

reduce greenhouse gas emissions rely on local government actions. The plan encourages local governments to reduce greenhouse gas emissions by approximately 15 percent from current levels by 2020 (CARB, 2008b).

The *Climate Change Proposed Scoping Plan* also included recommended measures that were developed to reduce greenhouse gas emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures, shown below in **Table 3.2-4** by sector, also put the state on a path to meet the long-term 2050 goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels. These measures were presented to and approved by the Air Resources Board on December 11, 2008. The measures in the Scoping Plan approved by the Board will be developed over the next two years and be in place by 2012.

**TABLE 3.2-4
LIST OF RECOMMENDED ACTIONS BY SECTOR**

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO ₂ E)
Transportation		
T-1	Pavley I and II □ Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3 ^a	Regional Transportation-Related Greenhouse Gas Targets	5
T-4	Vehicle Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures. • Ship Electrification at Ports • System-Wide Efficiency Improvements	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure □ Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
Electricity and Natural Gas		
E-1	Energy Efficiency (32,000 GWh of Reduced Demand) • Increased Utility Energy Efficiency Programs • More Stringent Building □ Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33□ by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) • Target of 3000 MW Total Installation by 2020	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions) • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1

**TABLE 3.2-4
LIST OF RECOMMENDED ACTIONS BY SECTOR**

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO2E)
Green Buildings		
GB-1	Green Buildings	26
Water		
W-1	Water Use Efficiency	1.4 ^b
W-2	Water Recycling	0.3 ^b
W-3	Water System Energy Efficiency	2.0 ^b
W-4	Reuse Urban Runoff	0.2 ^b
W-5	Increase Renewable Energy Production	0.9 ^b
W-6	Public Goods Charge (Water)	TBD ^b
Industry		
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.01
Recycling and Water Management		
RW-1	Landfill Methane Control (Discrete Early Action)	1
RW-2	Additional Reductions in Landfill Methane <ul style="list-style-type: none"> • Increase the Efficiency of Landfill Methane Capture 	TBD ^b
RW-3	High Recycling/Zero Water <ul style="list-style-type: none"> • Commercial Recycling • Increase Production and Markets for Compost • Anaerobic Digestion • Extended Producer Responsibility • Environmentally Preferable Purchasing 	9 ^b
Forests		
F-1	Sustainable Forest Target	5
High Global Warming Potential (GWP) Gases		
H-1	Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Services (Discrete Early Action)	0.26
H-2	SF ₆ Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	0.3
H-3	Reduction of Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	0.15
H-4	Limit High GWP Use in Consumer Products Discrete Early Action (Adopted June 2008)	0.25
H-5	High GWP Reductions from Mobile Sources <ul style="list-style-type: none"> • Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems • Air Conditioner Refrigerant Leak Test During Vehicle Smog Check • Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers • Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems 	3.3

**TABLE 3.2-4
LIST OF RECOMMENDED ACTIONS BY SECTOR**

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO₂E)
H-6	High GWP Reductions from Stationary Sources <ul style="list-style-type: none"> • High GWP Stationary Equipment Refrigerant Management Program: <ul style="list-style-type: none"> □ Refrigerant Tracking/Reporting/Repair Deposit Program □ Specifications for Commercial and Industrial Refrigeration Systems • Foam Recovery and Destruction Program • SF Leak Reduction and Recycling in Electrical Applications • Alternative Suppressants in Fire Protection Systems • Residential Refrigeration Early Retirement Program 	10.9
H-7	Mitigation Fee on High GWP Gases	5
Agriculture		
A-1	Methane Capture at Large Dairies	1.0 ^b

^a This is not the SB 375 regional target. CARB will establish regional targets for each MPO region following the input of the regional targets advisory committee and a consultation process with MPOs and other stakeholders per SB 375.

^b GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

Senate Bill 97

The provisions of Senate Bill 97, enacted in August 2007 as part of the state budget negotiations, direct the Office of Planning and Research (OPR) to propose CEQA Guidelines “for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions.” SB 97 directs OPR to develop such guidelines by July 2009, and directs the State Resources Agency, the agency charged with adopting the CEQA Guidelines, to certify and adopt such guidelines by January 2010.

OPR Technical Advisory, CEQA and Climate Change

On June 19, 2008, OPR published a technical advisory on CEQA and Climate Change. The advisory provides OPR’s perspective on the emerging role of CEQA in addressing climate change and greenhouse gas emissions, while recognizing that approaches and methodologies for calculating greenhouse gas emissions and addressing environmental impacts through CEQA review are rapidly evolving. The advisory recognizes that OPR will develop, and the Resources Agency will adopt amendments to the CEQA Guidelines pursuant to SB 97. In the interim, the technical advisory “offers informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents.” (OPR, 2008)

The technical advisory points out that neither CEQA nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. “This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable” (OPR, 2008). OPR recommends that “the global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions” (OPR, 2008). Until such a standard is established,

OPR advises that each lead agency should develop its own approach to performing an analysis for projects that generate greenhouse gas emissions (OPR, 2008).

OPR sets out the following process for evaluating greenhouse gas emissions. First, agencies should determine whether greenhouse gas emissions may be generated by a proposed project, and if so, quantify or estimate the emissions by type or source. Calculation, modeling or estimation of greenhouse gas emissions should include the emissions associated with vehicular traffic, energy consumption, water usage and construction activities (OPR, 2008).

Agencies should then assess whether the emissions are “cumulatively considerable” even though a project’s greenhouse gas emissions may be individually limited. OPR states: “Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment” (OPR, 2008). Individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice (OPR, 2008).

Finally, if the lead agency determines emissions are a cumulatively considerable contribution to a significant cumulative impact, the lead agency must investigate and implement ways to mitigate the emissions (OPR, 2008). OPR states: “Mitigation measures will vary with the type of project being contemplated, but may include alternative project designs or locations that conserve energy and water, measures that reduce vehicle miles traveled (VMT) by fossil-fueled vehicles, measures that contribute to established regional or programmatic mitigation strategies, and measures that sequester carbon to offset the emissions from the project” (OPR, 2008). OPR concludes that “A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is “less than significant” (OPR, 2008). The technical advisory includes a list of mitigation measures that can be applied on a project-by-project basis.

OPR Proposed Amendments to the CEQA Guidelines

On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009). These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments, as required by Senate Bill 97.

The proposed amendments suggest relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.

Proposed amendments include a new section (15064.4) to assist lead agencies in determining the significance of the GHG impacts. This section urges lead agencies to quantify, where possible, the GHG emissions of proposed projects. In addition to quantification, this section recommends consideration of several other qualitative factors that may be used in determination of

significance including: (1) the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the GHG emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The proposed amendments include a new subdivision 15064.7(c) to clarify that in developing thresholds of significance, a lead agency may appropriately review thresholds developed by other public agencies, including the CARB's recommended CEQA Thresholds, or suggested by other experts, such as the California Air Pollution Control Officers Association, so long as any threshold chosen is supported by substantial evidence.

The proposed amendments also include a new subdivision 15130(f) to emphasize that the effects of GHG emissions are cumulative, and should be analyzed when the incremental contribution of those emission may be cumulatively considerable.

In addition, the proposed amendments add a new set of environmental checklist questions (VII. Greenhouse Gas Emissions) to the CEQA Guidelines Appendix G. The new set includes the following questions. Would the project:

- a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHG?

The greenhouse gas analysis in this EIR has been prepared to comply with the OPR proposed amendments.

California Air Pollution Control Officers Association (CAPCOA)

In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating and addressing GHGs under CEQA (CAPCOA, 2008). This resource guide was prepared to support local governments as they develop their programs and policies around climate change issues. The paper is not a guidance document. It is not intended to dictate or direct how any agency chooses to address GHG emissions. Rather, it is intended to provide a common platform of information about key elements of CEQA as they pertain to GHG, including an analysis of different approaches to setting significance thresholds.

The paper notes that for a variety of reasons local agencies may decide not to have a CEQA threshold. Local agencies may also decide to assess projects on a case-by-case basis when the projects come forward. The paper also discusses a range of GHG emission thresholds that could be used. The range of thresholds discusses includes a GHG threshold of zero and several non-zero thresholds. Non-zero thresholds include percentage reductions for new projects that would allow the state to meet its goals for GHG emissions reductions by 2020 and perhaps 2050. These would be determined by a comparison of new emissions versus business as usual emissions and the

reductions required would be approximately 30 percent to achieve 2020 goals and 90 percent (effectively immediately) to achieve the more aggressive 2050 goals. These goals could be varied to apply differently to new project, by economic sector, or by region in the state.

Other non-zero thresholds are discussed in the paper include:

- 900 metric tons/year CO₂e (a market capture approach);
- 10,000 metric tons/year CO₂e (potential CARB mandatory reporting level with Cap and Trade);
- 25,000 metric tons/year CO₂e (the CARB mandatory reporting level for the statewide emissions inventory);
- 40,000 to 50,000 metric tons/year CO₂e (regulated emissions inventory capture – using percentages equivalent to those used in air districts for criteria air pollutants),
- Projects of statewide importance (9,000 metric tons/year CO₂e for residential, 13,000 metric tons/year CO₂e for office project, and 41,000 metric tons/year CO₂e for retail projects), and
- Unit-based thresholds and efficiency-based thresholds that were not quantified in the report.

CARB Draft GHG Significance Thresholds

On October 24, 2008, CARB released its *Preliminary Draft Staff Proposal on Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act* for review and public comment (CARB, 2008c). The Proposal identifies benchmarks or standards that assist lead agencies in the significance determination for industrial, residential, and commercial projects. Staff intends to make its final recommendations on thresholds in early 2009, consistent with OPR's timeline for issuing draft CEQA guidelines addressing GHG emissions and to provide much needed guidance to lead agencies in the near term. The *Proposal* currently focuses on two sectors for which local agencies are typically the CEQA lead agency: industrial projects; and residential and commercial projects. Future proposals will focus on transportation projects, large dairies and power plant projects.

In summary, the *Proposal* recommends:

- In general, categorical exemptions will continue to apply.
- If GHGs are adequately addressed at the programmatic level (i.e., consistent with regional GHG budgets), the impact of certain individual projects can be found to be insignificant.
- Industrial projects below the operational emissions level (7,000 metric tons/year CO₂e) that also meet performance standards for construction can be found to be less than significant.
- Residential and commercial projects below the operational emissions level (unspecified as of December 2008) that also meet performance standards for construction, energy, water, waste and transportation can be found to be less than significant.
- If a project cannot meet the above requirements, it should be presumed to have significant impacts related to climate change and all feasible GHG mitigation measures (i.e., carbon offsets) should be implemented.

For residential and commercial projects, CARB staff's objective is to develop a threshold on performance standards that will substantially reduce the greenhouse gas (GHG) emissions from new projects and streamline the permitting of carbon-efficient projects. Performance standards will address the five major emission sub-sources for the sector: energy use, transportation, water use, waste, and construction. Projects may alternatively incorporate mitigation equivalent to these performance standards, such as measures from green building rating systems.

Regional Comprehensive Plan and Guide

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG is the federally designated metropolitan planning organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. As the designated MPO, SCAG is mandated by the federal government to develop and implement regional plans that address transportation, growth management, hazardous waste management, and air quality issues. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the Los Angeles County region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation components of the Air Quality Management Plan (AQMP) and are utilized in the preparation of air quality forecasts and the consistency analysis that is included in the AQMP.

Los Angeles Countywide Energy and Environmental Policy

The County of Los Angeles does not currently have an adopted threshold of significance for greenhouse gas emissions. However, in 2007 the County of Los Angeles Board of Supervisors adopted a comprehensive Countywide Energy and Environmental policy that focuses on reducing the consumption of energy and water in County facilities by 20 percent before the year 2015. The policy areas include environmental stewardship, public outreach, education, sustainable design, and energy and water efficiency. In addition, the environmental footprint of County activities and facilities will be measured and enhanced in various areas such as resource conservation, waste reduction, and pollution prevention. The policy requires all County projects greater than 10,000 square feet to meet or exceed the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver standard. The policy also establishes an Energy and Environmental Team that will promote energy efficiency, waste reduction and environmental initiatives. All of the facets of the new policy seek collaboration across departments and with local government, industry, and other agencies to create a more sustainable County for all residents.

Local

Antelope Valley Air Quality Management District

The AVAQMD has jurisdiction over air quality for the project area. The AVAQMD has adopted an AQMP for determination of the significance of a project's contribution to local or regional pollutant concentrations. In addition, the Air Quality Attainment Plan (AQAP) for the Antelope Valley Air

Basin (AVAB) establishes a program of rules and regulations directed at attainment of state and national air quality standards. Accordingly, conformance with the AQAP for development projects is determined by demonstrating compliance with local land use plans. All development projects within the AVAQMD will be required to comply with existing rules as they apply to each specific project. No significance thresholds for greenhouse gases have been adopted by the AVAQMD, as of the time of this writing.

Sensitive Receptors

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public is to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. The closest sensitive receptor to construction is a residence approximately 250 feet away.

3.2.4 Impacts and Mitigation

Methodology

Construction Impacts

Daily construction emissions were forecast by using default values from the air quality emissions model URBEMIS 2007 version 9.2.4. The URBEMIS 2007 output sheets are provided in **Appendix C** of this document.

Operational Impacts

URBEMIS 2007 was also used to estimate the operational emissions of the proposed project. The proposed project does not include any substantial stationary or area sources of TAC emissions.

Significance Criteria

For the analysis of air quality with regard to criteria pollutants, CEQA Guidelines Appendix G was utilized, which states that the project would have a significant effect on air quality if it would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (to make this determination of significance SCAQMD significance thresholds presented below in **Table 3.2-5** are applied);
- Result in a cumulatively considerable net increase of any nonattainment pollutant (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

**TABLE 3.2-5
AIR QUALITY SIGNIFICANCE THRESHOLDS**

Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
CO	100	548
ROC	25	137
NO _x	25	137
SO ₂	25	137
PM ₁₀	15	82
CO ₂	NA	NA

NOTE: AVAQMD does not have thresholds for CO₂.

SOURCE: AV CEQA □ Conformity Guidelines, May 2005.

Construction. The project would result in a significant construction air quality impact if emissions exceed the significance thresholds set forth in Table 3.2-.5.

Operations. The project would result in a significant operational air quality impact if either of the following would occur:

- Emissions exceed the significance thresholds set forth in Table 3.2-.5.
- The project would not be compatible with AVAQMD or the Los Angeles County air quality goals and policies.

The CEQA Guidelines do not currently address significance criteria for greenhouse gases. The following criteria have been framed to address the issue:

Greenhouse Gas. The project would have a significant effect if it would¹:

- Conflict with the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by the timetable established in AB 32, California Global Warming Solutions Act of 2006;
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Project Impacts

Impact 3.2.1: The project would not conflict with or obstruct implementation of the applicable air quality plan (no impact).

The proposed project would not conflict with or obstruct implementation of the applicable Air Quality Attainment Plan. The project is located within the Antelope Valley Air Basin (Basin). Air

¹ While these thresholds are being utilized for the analysis of this project based on currently available information, the County does not have an adopted greenhouse gas threshold and is not adopting a threshold at this time by virtue of this analysis.

emissions in the Basin are regulated by the AVAQMD. The AVAQMD is required, pursuant to the Clean Air Act of 1988, to reduce emissions of criteria pollutants for which the Basin is in non-attainment. Strategies to achieve these emission reductions are developed in the AQMP prepared by AVAQMD for the region. The AQMP is based on SCAG population projections as well as land use designations and population projections included in General Plans for those communities located within the Basin. Population growth is typically associated with the construction of residential units or large employment centers. A project would be inconsistent with the AQMP if it results in population and/or employment growth that exceeds growth estimates for the area.

The proposed project would not result in population growth and would not cause an increase in currently established population projections. The proposed project does not include residential development or large local or regional employment centers, and thus would not result in significant population or employment growth. The proposed project is intended to expand the existing park facilities. As such, the proposed project would not conflict with or obstruct implementation of the applicable AQMP. No impact would occur and no further study related to compliance with applicable air quality plans is required.

Mitigation Measures: None required.

Impact 3.2.2: Project construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation (less than significant with mitigation incorporated).

Construction-related emissions would be short-term, but may still cause adverse effects on air quality. Project construction activities would include site preparation, earthmoving, and general construction. Site preparation includes activities such as general land clearing and grubbing. Earthmoving activities include cut-and-fill operations, trenching, soil compaction, and grading. General construction includes adding improvements such as roadway surfaces, structures, and facilities. The emissions generated from these construction activities include:

- Dust (including PM10 and PM2.5) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) such as soil disturbance;
- Combustion emissions of criteria air pollutants (ROG, NOx, carbon monoxide, carbon dioxide, PM10, and PM2.5) primarily from operation of heavy off-road construction equipment (primarily diesel-operated), portable auxiliary equipment, and construction worker automobile trips (primarily gasoline-operated); and
- Evaporative emissions (ROG) from asphalt paving and architectural coatings.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM10 concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only

PM₁₀, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts. It is mandatory for all construction projects in the Basin to comply with AVAQMD Rule 403 for fugitive dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the proposed project site, and maintaining effective cover over exposed areas.

NO_x, ROG, PM₁₀, PM_{2.5}, CO, and CO₂ construction emissions were estimated for a worst-case day based on default maximum crew, truck trip, and equipment. Emissions are based on criteria pollutant emission factors from URBEMIS 2007. Construction activities are proposed to begin in 2010 and end in 2011, resulting in construction duration of approximately 15 months. Calculations assume that construction would require the import of 18,000 cubic yards of soil (conservatively overestimated). The results of this analysis are summarized in **Table 3.2-6**. As shown in Table 3.2-6, no emissions would be greater than the significance criteria. Thus, construction-related emissions would be less than significant without mitigation.

TABLE 3.2-6
ESTIMATE OF UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS ^a
(pounds/day)

Phase	ROC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂
2010 Totals	4	32	16	1	5	2	3,418
2011 Totals	6	11	9	0	1	1	1,206
AVAQMD Significance Threshold	137	137	548	137	82	N/A	N/A
Exceed Threshold?	No	No	No	No	No	N/A	N/A

^a Compiled using the URBEMIS 2007 emissions inventory model. The equipment mix and use assumptions for each phase are provided in Appendix C.

NOTE: N/A is not available.

SOURCE: ESA, 2009.

AVAQMD Rule 403 requires that fugitive dust be controlled by implementing best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. As such, the construction activities will include implementation of Rule 403 provisions applicable to the proposed project, which include the following:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover;

- All on-site unpaved roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant;
- Limit traffic speeds on unpaved roads to 15 mph;
- Suspend excavation and grading activity when winds exceed 20 mph.;
- If possible, use alternative fueled or catalyst equipped diesel equipment; and
- Minimize idling time (e.g., 10 minute maximum) and limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.

Toxic Air Contaminants

Some population groups, such as children and the elderly, are considered more sensitive to air pollution than others. The nearest residential structures are over 250 feet from the nearest property line. Lands that surround Stephen Sorensen County Park are developed with single-family residences to the south, commercial uses further to the east along 170th Street East, and single family residences and open space to the west and north. The CARB has defined DPM as a TAC. According to AVAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. “Individual cancer risk” is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

Diesel fuel is a relatively small percentage of the fuel use during operations of a park project, but diesel fuel is the main fuel for most construction equipment. However, given the construction schedule of 15 months, the proposed project would not result in a long-term (i.e., 70-years) substantial source of TAC emissions and long-term project-related toxic emission impacts during construction would not be significant. In addition, air pollutants from daily park operations would be minimal since there are no major emissions sources operating or planned for operation on-site. Emissions from construction and park operations would not result in a significant impact to a sensitive receptor and impacts are considered less than significant.

Mitigation Measures: Added to further reduce impacts from project construction.

AIR 1a: Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer’s specifications.

AIR 1b: Applicant shall ensure that contractors maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions.

AIR 1c: Wheel washers shall be installed where vehicles exit the construction site onto paved roads.

AIR 1d: Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.

Significance after Mitigation: Less than significant.

Impact 3.2.3: Project operation would not violate air quality standards or contribute substantially to an existing or projected air quality violation during long-term operation (less than significant).

Operational emissions for the proposed project would be generated primarily from on-road vehicular traffic, area sources (such as landscaping equipment), and indirectly by the energy consumption of the project. Because power is provided over an integrated electricity grid, indirect emissions from the use of electricity could occur at any of the fossil-fueled power plants in California or neighboring states, or from hydroelectric or nuclear plants or renewable energy sources. For all power plants, it can be assumed that the emissions are reviewed as part of the permitting process before the power plant is built or expanded.

Operational emissions for mobile and area sources are based on criteria pollutant emission factors from URBEMIS 2007. The results of this analysis are summarized in **Table 3.2-7**. As shown in Table 3.2-7 no emissions would be greater than the significance criteria. Thus, operation-related emissions would be less than significant without mitigation. The proposed project will utilize solar panels for a portion of its energy needs. This would further reduce area source emissions, reducing the already less than significant impact.

Mitigation Measures: None required.

**TABLE 3.2-7
ESTIMATE OF OPERATIONAL EMISSIONS^a
(pounds/day)**

	ROC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Area Sources	□1	□1	2	0	0	0	154 ^b
Mobile Sources	4	6	47	□1	7	1	4,039
Daily Total	4	6	49	□1	7	1	4,193
AVAQMD Significance Threshold	137	137	548	137	82	N/A	N/A
Exceed Threshold?	No	No	No	No	No	N/A	N/A

^a Compiled using the URBEMIS 2007 emissions inventory model. The equipment mix and use assumption for each phase is provided in Appendix C.

^b Worst case scenario excluding the projects use of solar panels. Solar panels would only reduce indirect electricity emissions.

NOTE: N/A means not available. □

SOURCE: ESA, 2008.

Impact 3.2.4: The project would not conflict with implementation of state goals for reducing greenhouse gas emissions or any other applicable plan, policy or regulation and thereby have a negative effect on Global Climate Change (less than significant).

As with other individual relatively small projects (i.e., projects that are not cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, or hydrogen plants or other stationary combustion sources that emit more than 25,000 MMT per year CO₂E), the specific emissions from this project would not be expected to individually have an impact on Global Climate Change (AEP, 2007). Given the lack of guidance from the State of California and the CEQA Guidelines on thresholds for assessing the impact of greenhouse gas emissions, three considerations will be used to determine whether they could be in conflict with the state goals for reducing greenhouse gas emissions. These considerations were developed from a review of recent publications and actions from CARB that address how the state plans to achieve the goals of reducing greenhouse gases. The considerations are shown directly below and include a review of:

- A. Any potential conflicts with the CARB's thirty-nine (39) recommended actions in the Climate Change Scoping Plan (see Table 3.2-4).
- B. Although Los Angeles County has no adopted greenhouse gas threshold, this analysis considers the relative size of the project. The project's greenhouse gas emissions are compared to the size of major facilities that are required to report greenhouse gas emissions (25,000 metric tons of CO₂E/yr)² to the state; and the project emissions are compared to the estimated greenhouse reduction state goal of 174 million metric tons CO₂E per year by 2020. As noted above the 25,000 metric ton limit identifies the large stationary point sources in California that make up 94 percent of the stationary emissions. If the project's total emissions are below this limit, its total emissions are equivalent in size to the smaller projects in California that as a group only make up 6 percent of all stationary emissions. It is assumed that the activities of these smaller projects will not conflict with state's ability to reach AB 32 overall goals. In reaching its goals the ARB will focus upon the largest emitters of greenhouse gas emissions.
- C. The basic energy efficiency parameters of the project to determine whether its design is inherently energy efficient.
- D. Any potential conflicts with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

With regard to Item A, the project does not pose any apparent conflict with the most recent list of the CARB's recommended actions to meet AB 32 greenhouse gas reduction goals (see Table 3.2-4).

With regard to Item B, project construction greenhouse gas emissions would be approximately 224 metric tons of CO₂E/yr in the maximum year (the construction year that emitted the highest amounts of CO₂) and project operations would be approximately 1,035 metric tons of CO₂E/yr (including emissions from vehicle trips, space heating and indirect emissions from the use of electricity, minus the amount of electricity provided by solar power). The assumptions for project

² The State of California has not provided guidance as to quantitative significance thresholds for assessing the impact of greenhouse gas emissions on climate change and global warming concerns. Nothing in the CEQA Guidelines directly addresses this issue.

construction emission calculations are consistent with information provided in the Project Description Chapter, and the emissions calculations provided by the URBEMIS calculations above (and in Appendix C of this EIR). The project would not be classified as a major source of greenhouse gas emissions (actually operational emissions would be about 4 percent of the lower reporting limit, which is 25,000 metric tons of CO₂E/yr). When compared to the overall state reduction goal of approximately 174 million metric tons CO₂E/yr, the maximum greenhouse gas emissions for the project (1,035 metric tons CO₂E/yr or 0.0006 percent of the state goal) are quite small and would not conflict with the state's ability to meet the AB 32 goals. When compared to 1990 statewide emissions of 427 million metric tons CO₂E/yr, the project emissions are also quite small. The project's estimated construction-related greenhouse gas emissions would be only 0.00005 percent of the total estimated state annual estimated greenhouse gas emissions, and the project's estimated operational-related greenhouse gas emissions would be only 0.0002 percent of the total estimated state emissions. Combined construction plus operational emissions would be only 0.0003 percent of statewide emissions; however, construction and operational emissions probably would not occur at the same time.

With regard to Item C, the project would serve the local population and present new opportunities for recreation with shorter travel distances, which would be a positive effect of the project. The project would also integrate sustainable green design features, which would reduce long-term energy demand, lowering the project's "carbon footprint." The project has been designed to meet the United States Green Building Council's Silver standard (or better) under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.³ Future reductions in energy demand directly reduce the emission of greenhouse gases.

With regard to Item D, the project would not conflict with any identified applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The project's greenhouse gas emissions would not be significant, based on the thresholds cited above, for the construction or operational emissions, or for the combined construction and operation emissions of greenhouse gasses (224 metric tons of CO₂E/yr during construction + 1,035 metric tons of CO₂E/yr for operations = 1,259 metric tons of CO₂E/yr combined). Review of Items A, B, C and D indicates that the project would not conflict with the state goals in AB 32. The project would not conflict with any of the recommended actions in the AB 32 Scoping Plan and the project falls below the 25,000 metric ton mandatory reporting significance threshold and below most limits suggested by other agencies. Finally, the project location will allow for short travel distances for recreation and the building would likely incorporate LEED sustainable green design features, which would reduce long-term energy demand, lowering the project's "carbon footprint." Thus, the project would not conflict with the goals of AB 32 and the impact would be less than significant.

³ This certification takes place later in the process. The LEED Checklist demonstrating the proposed project's sustainable features is provided in Appendix A of this EIR.

Mitigation Measures: None required. Project features would likely include LEED Certification and the proposed project would be in compliance with the Countywide Energy and Environmental Policy.

Impact 3.2.5: The project would not create objectionable odors affecting a substantial amount of people (less than significant).

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. AVAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. The construction phase of the project is anticipated to occur for a period of 15 months, and the quantity of coating and solvents anticipated for use are minimal. In addition, the nearest homes are 225 feet from the project site, and via mandatory compliance with AVAQMD rules, no construction activities or materials are proposed which would create objectionable odors that exceed applicable thresholds. The project operations for park and recreational uses would not create objectionable odors. As such, impacts from construction and operation are less than significant.

Mitigation Measures: None required.

Impact 3.2.6: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) or for greenhouse gas emissions (less than significant).

The AVAQMD's methods for considering cumulative impacts with regard to criteria pollutants are based on performance standards and emission reduction targets necessary to attain the state and federal air quality standards identified in the AQMP. These criteria can be used to determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is less than significant (Guidelines Section 15130(a)(3)). The AQMP was prepared to accommodate growth, reduce pollution in the basin, and to minimize the fiscal impact that pollution control measures have on the economy. As such, these standards and emission targets also take into account SCAG's forecasted future regional growth. Therefore, the analysis of cumulative impacts focuses on determining whether the project is consistent with forecasted future regional growth. If the analysis shows that an individual project is consistent with the AQMP performance standards, the project's cumulative impacts could be considered to be less than significant. As provided in Impacts 3.2.1 through 3.2.4, the proposed project is consistent with the AQMP performance standards, and does not result in a significant impact to air quality. This would apply to both construction and operational emissions from the project. In addition, local construction impacts would not be cumulatively considerable, as there are no known cumulative projects within five miles of the proposed project (see Chapter 2, Project Description, Section 2.7). As a result, potential cumulative impacts for criteria pollutants are considered less than significant.

The proposed project's cumulative impact with regard to greenhouse gasses is also considered less than significant, based upon the project analysis provided above, and the small percentage of impact compared to existing statewide greenhouse gas emissions and compared to the state's goal for reducing statewide greenhouse gas emissions.

Mitigation Measures: None required.

3.3. Biological Resources

3.3.1 Introduction

This section describes the existing condition of biological resources on and within the vicinity of the proposed project and evaluates the potential for the proposed project to result in any significant adverse environmental impacts to biological resources. The analysis first describes the range of biological resources potentially exposed to effects of the proposed project and then determines if the proposed project elements could have significant impacts on these resources. Finally, this section evaluates the impacts to determine if, alone or together, they exceed the stated standards of significance, and if so, whether they can be mitigated to less than significant levels. Feasible mitigation measures are provided to reduce potentially significant impacts to a less-than-significant level.

3.3.2 Environmental Setting

On-Site

ESA biologists conducted two surveys on the project site on November 4, 2005 (ESA, 2006) and November 16, 2007 to characterize site vegetation and to conduct a presence/absence surveys for the desert tortoise (*Gopherus agassizii*). A third survey was conducted on June 16, 2009 to conduct a botanical survey for potentially occurring special status plants, a burrowing owl (*Athene cunicularia*) Phase II: Burrow Survey (The California Burrowing Owl Consortium, 1993), and a presence/absence survey for desert tortoise (USFWS, 2009). During each assessment, surveys were conducted by walking transect lines 50-100 feet apart to obtain 100% visual coverage, walking perpendicular to Avenue P in a north to south direction. Surveys focused on searching for tortoise signs (e.g., shells, bones, scutes, pellets, scat, tracks, eggshell fragments, courtship rings, etc.) and tortoise burrows, as well as potential borrowing owl burrows and sign (i.e., feathers, pellets or excrement). All other wildlife (including signs) observed during each surveys was noted. The methodology used for performing the plant survey followed the California Department of Fish and Game's *Guidelines For Assessing The Effects Of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (Revised October, 22, 2008), and the CNPS 2001 Policy on *Botanical Survey Guidelines of the California Native Plant Society*.

Topography at the project site is generally flat. Avenue P is located to the west and south of the site and the Lovejoy Buttes lie to the east. Soils on site are generally dry, rocky, and friable, becoming increasingly hard and firm with increasing elevation towards the east as well as on disturbed areas from off highway vehicle (OHV) usage.

The proposed project footprint contains both ruderal¹ and disturbed desert scrub habitat. The project site is primarily disturbed and contains areas of compacted bare ground. Trash and OHV

¹ Ruderal is defined as growing in poor land or waste, along roadsides, or in rubbish. A ruderal species is a plant species that is first to colonize disturbed lands. The disturbance may be natural (e.g., wildfires or avalanches), or man-made - constructional (e.g., road construction, building construction or mining), or agricultural (e.g., abandoned farming fields or abandoned irrigation ditches).

tracks provide evidence of off-road vehicle usage and human disturbance. The majority of the proposed project would occur within these highly disturbed areas. Native vegetation adapted to the dry environment of the region is scattered about the site, with more substantial clusters of vegetation found near the northwestern portion of the site, bordering Avenue P. The dominant vegetation on the site comprises a mixture of desert scrub that is adapted to disturbed conditions including rabbitbrush (*Chrysothamnus* sp.), big sagebrush (*Artemisia tridentata*), with some creosote bush (*Larrea tridentata*), and non-native Russian thistle (*Salsola* sp.). Some annual herbs and native and non-native wildflowers may appear during spring months when water is seasonally available.

There are over three dozen special-status animal species with the potential to occur in the vicinity of the project site, either as residents or transient animals from more intact habitats to the west and south. Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as “sensitive” on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as “special-status species” in this report following a convention that has developed in practice but has no official sanction. The various categories encompassed by the term, and the legal status of each, are discussed in the Regulatory Setting section of this report. For the purposes of this assessment, the term “special-status” includes:

- Species that are federally listed or proposed under the Federal Endangered Species Act (50 CFR 17.11-17.12);
- Species that are candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);
- Species that are state listed or proposed under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the USFWS or CDFG as a species of concern (USFWS), rare (CDFG), or of special concern (CDFG);
- Fully protected animals as defined by the State of California (CDFG Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (State of California CDFG Code Section 1900 *et seq.*); and
- Plants listed by the California Native Plant Society (CNPS) as rare, threatened, or endangered (List 1A and List 2 status plants in CNPS 2009).

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project area was compiled based on data in the CNDDDB (CDFG, 2009), CNPS literature (CNPS, 2009), and the U.S. Fish and Wildlife Service List of Federal Endangered and Threatened Species that may be Affected by Projects in the Lovejoy Buttes U.S. Geological Survey 7.5-

minute quadrangle and the eight surrounding quadrangles (High Vista, Alpine Buttes, Littlerock, Juniper Hills, Valyermo, Mescal Creek, El Mirage, and Adobe Mountain) (USFWS, 2009). The potential for special-status species to occur on the project site is based on the proximity of the project to previously recorded occurrences in the CNDDDB, on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, and geographic ranges of special-status plant and wildlife species known to occur in the region.

Based on the results of the database search, habitat affinities of the species, and professional judgment,² **Table 3.3-1, Special-status Species with Likeliest Potential to Occur within the Vicinity of the Site** lists eight (8) special-status animal species with a low to moderate potential to occur at the project site. The project site does not contain habitat for special-status plant species that have been previously recorded in the region; therefore, special-status plants are not included in Table 3.3-1.

The “Likelihood of Occurrence” category is defined as follows:

Very Low: The project site and/or immediate area do not support suitable habitat for a particular species, and therefore the project is unlikely to impact this species.

Low: Project site and/or immediate area only provide limited habitat for a particular species that is likely avoided by proposed development. In addition, the known range for a particular species may be outside of the immediate project area.

Moderate: The project site and/or immediate area provide suitable habitat for a particular species, and proposed development may impact this species. Mitigation will likely avoid potential impacts.

High: The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate the area. Proposed development will directly impact habitat associated with this species.

Off-Site

Adjacent habitats to the project site include Joshua tree woodland to the west-northwest, beyond which is residential development; E Avenue P to the west and south, beyond which is creosote bush scrub and residential development; to the southwest is the built Phases of Stephen Sorenson Park; to the northwest is Lovejoy Spring; and to the north is Lovejoy Lake, a historical, dry lakebed that supports mature cottonwood trees, rubber rabbit brush, sandy soils and large boulders, beyond which is residential development. Vegetation observed within Lovejoy Springs includes willows (*Salix* sp.), mulefat (*Bacharis salicifolia*), cottonwood trees (*Populus fremontii*), rushes (*Juncus* sp.), and non-native species such as tamarisk (*Tamarix gallica*), giant reed grass (*Arundo donax*), and wild mustards.

² ESA conducted a site reconnaissance visits in November 2005, results of that survey are found in the Stephen Sorenson County Park Planning Study located in Appendix A (see Chapter II, page II-1). November 2007 site reconnaissance confirmed the existing conditions established in the planning study. The results of the June 16, 2009 site visit conducted by ESA are provided in this Biological Resources Section.

**TABLE 3.3-1
SPECIAL-STATUS SPECIES WITH LIKELIEST POTENTIAL TO OCCUR WITHIN
THE VICINITY OF THE SITE**

Species	Listing Status (USFWS □ CDFG □ CNPS)	Likelihood of Occurrence	Comments
Plants			
<i>Cryptantha clokeyi</i> Clokey's cryptantha	--/--/1B.1	Low	Occurs in mohavean desert scrub in sandy or gravelly soils at approximately 850 meters above sea level (msl). The blooming period for this species is April. Plant surveys have not been conducted during the appropriate time of year to determine presence or absence from the project site.
<i>Plagiobothrys parishii</i> Parish's popcorn-flower	--/--/1B.1	Low	Occurs in great basin scrub (<i>A. tridentata</i>), Joshua tree woodland, on alkaline soils. 750-1400 msl. Blooming period is March through June. This species was not observed during the survey conducted on June 16, 2009.
Animals			
<i>Toxostoma lecontei</i> Le Conte's thrasher	--/SC/--	Moderate	Found in open desert scrub, alkali desert scrub, and desert succulent scrub. Not observed during surveys, performed 11/4/05, 11/16/07, and 06/16/09.
<i>Athene cunicularia</i> Burrowing owl	--/SC/--	Low	Found in open, dry grasslands, agricultural and range lands, and desert habitats characterized by low-growing vegetation; often associated with burrowing animals. Not observed during surveys, performed 11/4/05, 11/16/07, and 06/16/09.
<i>Buteo swainsoni</i> Swainson's hawk	--/ST/--	Low	No nesting habitat present on project site. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Not observed during surveys performed 11/4/05, 11/16/07, and 06/16/09.
<i>Gopherus agassizii</i> Desert tortoise	FT/ST/--	Very Low	No suitable burrows or sign of desert tortoise observed during surveys conducted on 11/4/05, 11/16/07, and 06/16/09. Found in desert environments of southern California, especially in creosote bush scrub. Substantial development around the site precludes the occurrence of this species.
<i>Onychomys torridus Ramona</i> Southern grasshopper mouse	--/SC/--	Low	This species is nocturnal. The range of this species extends from the southeast corner of the state northwest to the San Joaquin Valley. Found in the desert areas; especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.
<i>Spermophilus mohavensis</i> Mojave ground squirrel	--/ST/--	Low	This species is cryptic and is active during the daytime. Found exclusively in the western Mojave Desert. Occurs in open desert scrub, alkali scrub and Joshua tree woodland. Prefers sandy to gravelly soils and uses burrows at base of shrubs for cover. Not observed during surveys, performed 11/4/05, 11/16/07, and 06/16/09.

Status Codes:

Federal (USFWS)
FT □ federally threatened

State (CDFG)
ST □ state threatened
SC □ state species of special concern

CNPS
1B □ plants rare, threatened, or endangered in the state and elsewhere
.1 □ seriously threatened in California

SOURCES: CNDDB, 2006; Skinner and Pavik, 1986.

3.3.3 Regulatory Framework

Special-Status Species

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) in the Department of the Interior, and the National Marine Fisheries Service (NMFS) under the National Oceanic and Atmospheric Administration (NOAA) in the Department of Commerce share responsibility for administration of the federal Endangered Species Act (FESA). The FESA provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the United States or elsewhere. The FESA has four major components: provisions are made for listing species, requirements for federal agency consultation with USFWS or NMFS if a federal action could result in an adverse affect on a listed species, prohibitions against “taking” of listed species, and the provisions for permits that allow incidental “take” of listed species for otherwise lawful activities. Under FESA, the term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The definition of “harm” includes the adverse modification or impact of habitat for listed species. The FESA also requires the preparation of recovery plans and the designation of critical habitat for listed species.

The Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or “take” any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. “Take” is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the Migratory Bird Treaty Act.

California Fish and Game Code

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Section 2050 *et. seq.*) is similar to the main provisions of the FESA and is administered by the California Department of Fish and Game (CDFG). Unlike its federal counterpart, CESA applies the take prohibitions to not only listed threatened and endangered species, but also to state candidate species for listing. Section 86 of the Fish and Game Code defines “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CDFG maintains lists for Candidate-Endangered Species and Candidate-Threatened Species, which have the same protection as listed species. Under CESA the term “endangered species” is defined as a species of plant, fish, or wildlife, which is “in serious danger of becoming extinct throughout all, or a significant portion of its range” and is limited to species or subspecies native to California. CESA prohibits the “taking” of listed species except as with the FESA issues take permits for otherwise lawful activities.

California Fish and Game Code Sections 3503 and 3503.5

Fish and Game Code 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 states specifically that it is unlawful to

take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

California Fish and Game Code Section 3511, 4700 and 5050

Fish and Game Code Sections 3511, 4700 and 5050 provide the designation of certain fully protected birds, mammals, and reptiles/amphibians respectively stating that the fully protected species or parts thereof may not be taken or possessed at any time.

Clean Water Act Section 404

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army USACE of Engineers (USACE) which generally defines wetlands through consideration of three criteria: hydrology, soils, and vegetation. Under Section 404 of the Clean Water Act (CWA), the USACE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term “waters” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations. All three of the identified technical parameters (hydrology, soils, and vegetation) must be met for an area to be identified as a wetland under USACE CWA Section 404 jurisdiction, unless the area has been modified by human activity. In general, a permit must be obtained before the discharge of dredged or fill material can be placed in wetlands or other waters of the United States. The USACE at its discretion issues several types of permits (Nationwide, Individual, or General) depending on the acreage and purpose of discharge of fill or dredged material into waters of the United States.

The USACE and Environmental Protection Agency (EPA) have issued a set of guidance documents detailing the process for determining Clean Water Act Jurisdiction following the U.S. Supreme Court’s decision in *Rapanos v. United States* and *Carabell v. United States* (herein referred to simply as “*Rapanos*”). The EPA and USACE issued a summary memorandum of the guidance for implementing the Supreme Court’s decision in *Rapanos* that addresses the jurisdiction over waters of the United States under the Clean Water Act. The complete set of guidance documents summarized as key points below, are used for evaluation by the EPA and the USACE to determine Clean Water Act jurisdiction over potential waters of the U.S. including wetlands and to complete the “significant nexus test” as detailed in the guidelines and the USACE Approved Jurisdictional Determination Form.

The significant nexus test includes consideration of hydrologic and ecologic factors. For circumstances in situations (B) below the significant nexus test would take into account physical indicators of flow (evidence of an Ordinary High Water Mark; OHWM), if a hydrologic connection to a traditional navigable water exists, and if the aquatic functions of the water body has a significant effect (more than speculative or insubstantial) on the chemical, physical, and

biological integrity of a traditional navigable water. The USACE and EPA will apply the significant nexus standard to assess the flow characteristics and functions of potential waters of the U.S. to determine if it significantly affects the chemical, physical and biological integrity of downstream traditional navigable waters.

Rapanos Key Points Summary

(A) The USACE and EPA will assert jurisdiction over the following waters:

- Traditional navigable waters. The EPA and USACE Clean Water Act jurisdiction following the U.S. Supreme Court's Rapanos Decision affirms that EPA and the USACE will continue to assert jurisdiction over Traditional Navigable Waters (TNWs) that are defined as, "All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide."
- Wetlands adjacent to traditional navigable waters.
- Non-navigable tributaries of traditional navigable waters that are relatively permanent (Relatively Permanent Waters; RPWs) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
- Wetlands that directly abut such tributaries.

(B) The USACE and EPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

(C) The USACE and EPA generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow).
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Clean Water Act Section 401 Water Quality Certification and State Waste Discharge Permit under the Porter-Cologne Act

The State of California regulates water quality related to discharge of fill material into waters of the U.S. pursuant to Section 401 of the Clean Water Act. Section 401 compliance is a federal mandate regulated by the State. The local Regional Water Quality Control Boards (RWQCB) have jurisdiction over all those areas defined as jurisdictional under Section 404 of the CWA. Where a 404 permit is required, a 401 water quality certification from the RWQCB is also required.

In addition, the State regulates water quality for all waters of the State, that may also include isolated wetlands as defined under the California Porter-Cologne Water Quality Control Act

(Porter Cologne; Ca. Water Code, Div. 7, §13000 et seq.). The State 401 Certification Program regulates all discharges that can affect water quality, even if there is no significant nexus to a traditional navigable water body required for USACE determination of jurisdiction over waters of the United States. In such instances, a Waste Discharge Permit is required even though federal Clean Water Act Section 401 water quality certification or 404 permits are not required.

California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement

Jurisdictional authority of the CDFG over the bed, bank, or channel of a river, stream, or lake is established under Section 1600 *et. seq.* of the California Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream, or lake resulting in a substantial effect on a fish or wildlife resource without notifying the CDFG and completing the Streambed Alteration Agreement process.

Local or Regional Ordinance, Codes, and Policies

The Los Angeles County General Plan (1993) is a land use guidance document that includes goals and policies regarding the protection of biological resources within the County, along with other environmental resources, including the Antelope Valley Areawide General Plan (adopted December 4, 1986).

The General Plan includes the following General Policy:

Policy 15: Protect areas that have significant natural resources and scenic values, including significant ecological areas, the coastal zone and prime agricultural lands.

The General Plan Land Use Element includes General Conditions and Standards for development in the County. Conditions and standards have been developed for the County's Significant Ecological Areas (SEAs). The General Plan states that:

Within SEAs the following activities are considered compatible by definitions: regulated scientific study; passive recreation including wildlife observation and photography; and limited picnicking, riding, hiking, and overnight camping.

The General Plan lists other land uses that may be compatible as determined by a detailed biotic survey and conditioned as may be necessary to ensure protection of identified biologic resources.

The Conservation, Open Space and Recreation element describes Biotic Resources as follows:

The County's biotic resources can be broken into four geographic area including, 1) coastline, 2) hill and mountain ranges, 3) desert and 4) lowlands and inland valleys; each of these geographic regions has an associated ecologic unit.

The County has identified more than 60 SEAs that represent a wide range of biotic communities. These areas also have stringent development standards associated with each.

The Conservation, Open Space and Recreation element includes the following goal and selected policies regarding ecological resources:

- Goal: To preserve and protect prime agricultural lands, forests, fisheries, significant ecological areas and other biotic resources.
- Policy 8: Preserve significant ecological areas by appropriate measures, including preservation, mitigation, and enhancement.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. The following policies are applicable to the proposed project.

- Policy 122: In order to promote and preserve biotic diversity in the Antelope Valley and Los Angeles County, designate rare and unique plant and wildlife habitats in the Antelope Valley as “Significant Ecological Areas” (SEA’s) and establish appropriate measures for their protection.
- Policy 123: Preserve the Antelope Valley’s SEA’s in as viable and natural a condition as possible, recognizing the resource values at stake and the constraints imposed by competing priorities and objectives.
- Policy 124: Consider the addition of unique and rare habitat areas as “Significant Ecological Areas” when appropriate in the future, particularly when a new species is added to State or Federal “Rare, Threatened or Endangered” lists and the critical habitat for such a species has been defined.
- Policy 129: Encourage clustering of structures for projects in SEA’s to assure compatibility with the unique and rare resources present.

The Antelope Valley Areawide General Plan has identified several land uses which are inherently compatible with SEA’s. These activities include regulated scientific study; passive recreation including wildlife observation and photography; and limited picnicking, riding, hiking, and overnight camping. Additional uses may also be compatible, as determined by a detailed biotic survey of the area, and could include:³

- 1) Residential uses at densities compatible with the resource values present and consistent with the community character in terms of both overall density and magnitude.
- 2) Commercial uses of minor nature serving local residents and visitors.

³ *Ibid.* p. VI-18.

- 3) Where no alternative site or alignment is feasible, public and semi-public uses essential to the maintenance of public health, safety and welfare;
- 4) Agricultural uses compatible with the resource values present;
- 5) Where compatible with identified biotic resources, extractive uses including oil and gas recovery, and rock, sand and gravel quarrying; and
- 6) Uses related to the conservation of water.

3.3.4 Impacts and Mitigation

Methodology

A biologic impact analysis was conducted through researching biologic species databases, conducting site reconnaissance surveys, performing species specific surveys, and evaluating the existing biologic environment compared to changes that may occur as a result of the proposed project, while considering the *CEQA Guidelines* thresholds.

Significance Criteria

Based on the *CEQA Guidelines*, a project may be deemed to have a significant effect on the environment with respect to biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance; and/or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or approved local, regional, or state habitat conservation plan.

Project Impacts

Impact 3.3.1: The proposed project would not have a substantial adverse affect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (less than significant with mitigation).

As shown in Table 3.3-1, there are two CNPS 1B.1 special-status plants and six animal species with a low or moderate potential to occur on or adjacent to the site. These species include: Clokey's cryptantha, Parish's popcorn-flower, the Le Conte's thrasher, burrowing owl, Swainson's hawk, desert tortoise, southern grasshopper mouse and the Mojave ground squirrel. The Swainson's hawk, Mojave ground squirrel, and desert tortoise are threatened species as listed by the state. The desert tortoise is also listed as a federally threatened species.

As previously indicated, ESA biologists conducted three, one-day surveys for the presence of suitable burrows and sign desert tortoise on the project site and in an approximate 250 foot buffer north and east of the site. During these surveys, no special-status species, or sign of, were observed. Desert tortoises are most commonly found in desert scrub, desert wash and Joshua tree habitats, although they are found in almost every desert habitat. Desert tortoises require friable soil for burrow construction and prefer creosote bush habitat with annual wildflower blooms. Burrows are generally constructed in gravelly soil on open desert or in the banks of desert washes. According to the CNDDDB, the nearest recorded occurrence was in the Adobe Mountain Quadrangle in 2004 which lies approximately 10 miles to the northeast of the Love Joy Buttes quadrangle. As previously indicated, no burrows, desert tortoises or sign of desert tortoises were observed during the surveys conducted by ESA biologists. Desert tortoise are not expected to occur on the site because 1) they favor more level areas with less dense vegetation, 2) existing development and E Avenue P fragment the project site from open space areas containing suitable habitat in the region, 3) desert tortoises are likely extirpated from the Antelope Valley (BioSystems, 1994), and 4) no sign of desert tortoise presence was observed on the project site during three focused surveys. Implementation of Mitigation Measure BIO-1 would reduce potential impacts on terrestrial animal species.

No burrowing owls or sign of burrowing owls (i.e., pellets, excrement, feathers, and occupied burrows) were observed on the project site during the three surveys conducted by ESA biologists; therefore, this species is not expected to forage or nest on the project site. During the focused survey conducted on June 16, 200, one ground squirrel burrow was observed that could potentially be used by a burrowing owl at a later time. No other suitable burrows were observed within the project site. Implementation of Mitigation Measure BIO-2 would reduce potential impacts to a level of less than significant.

The Mohave ground squirrel has been recorded in the vicinity of the project site. Although the project site is disturbed and is fragmented from open space by urban development and roads, it does contain marginal habitat capable of supporting this species. Protocol surveys were not conducted to determine if Mohave ground squirrels are present or absent from the site. Implementation of Mitigation Measure BIO-3 would reduce potential impacts to a level of less than significant.

The southern grasshopper mouse is a nocturnal species that is active year-round. It is common in arid desert habitats of the Mojave Desert and southern Central Valley of California, occurring primarily in alkali desert scrub and desert scrub habitats with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. It is uncommon in valley foothill and montane riparian, and in a variety of other habitats (CDFG, 1999).

Implementation of Mitigation Measure BIO-4 would reduce potential impacts to a level of less than significant.

Le Conte's thrasher and Swainson's hawk could forage on the project site; however, suitable nesting habitat is not present for these species. Le Conte's thrasher typically nest in dense, spiny shrub or densely branched cactus and Swainson's hawk requires nesting trees, usually trees bordering agricultural fields, in wetland borders, and on abandoned farms. Suitable nesting habitat is not present on the project site for these species.

If construction activities such as construction noise and vibration were to cause the direct mortality or indirectly affect any nesting resident or migratory birds, this would be a violation of the Fish and Game Code of California and the federal Migratory Bird Treaty Act. Implementation of Mitigation Measure BIO-5 would reduce potential impacts to a level of less than significant.

The project site provides marginal habitat for two special-status plant species that have been previously recorded in the region (CNDDDB, 2009): the Clokey's cryptantha and Parish's popcorn-flower. However, neither species would be expected to occur on the site due to the regular disturbance that is caused by OHV and human use. These species would have a greater potential for occurrence in nearby undisturbed habitats when compared to the disturbed condition of the project site. Moreover, Parish's popcorn-flower was not observed during the focused survey conducted on June 16, 2009, which was conducted during the typical blooming period for this species. Therefore, it is determined that Parish's popcorn-flower is absent from the project site. Impacts to these plant species would be considered less than significant.

Mitigation Measures:

BIO – 1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction.

BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.

If any burrowing owls are identified, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31 for owls), including a minimum 250-foot non-disturbance buffer zone around any occupied burrow. The size of non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.

If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County shall implement a burrowing owl passive relocation program that shall adhere to the CBOC guidelines regarding burrowing owls. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:

Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.

BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 1:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (*Spermophilus mohavensis*). The agreed upon 1:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.

Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 1:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.

BIO-4: Southern Grasshopper Mouse. Preconstruction surveys for the southern grasshopper mouse shall occur prior to ground disturbing activities. Five consecutive nighttime trapping surveys shall be conducted by a qualified biologist. If southern grasshopper mice are trapped, they shall be relocated to a nearby location containing suitable habitat. Trapping techniques and methodology, and release locations shall be coordinated with the CDFG prior to initiating surveys. A completion letter shall be prepared and submitted to the County and the CDFG within 30 days following the completion of trapping surveys.

BIO-5: Nesting Resident and/or Migratory Birds including Raptors. Within 30 days of any project ground disturbing or vegetation removal actions during the nesting season

(February 1 through August 31), the County shall have a qualified biologist conduct a pre-construction nesting bird and survey. The biologist shall be qualified to determine the status and stage of nesting efforts by resident and/or migratory birds including locally breeding raptor species without causing intrusive disturbance. This survey should cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.

If an active nesting effort is confirmed or considered likely by the biologist, the nest site shall be avoided and a non-disturbance buffer zone established by the biologist and approved by the County in consultation with the CDFG. The nest site avoidance and non-disturbance buffer zone shall be maintained until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist. If nest avoidance is not feasible, then the County shall obtain the necessary permits or authorizations from the USFWS and/or CDFG to impact the nesting effort that could require taking the young nestlings to a qualified wildlife rehabilitation center.

Significance after Mitigation: Less than significant.

Impact 3.3.2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (no impact).

While the Stephen Sorensen County Park does contain an ephemeral drainage which contains some riparian vegetation, the proposed project footprint is located in an upland area of ruderal and disturbed desert scrub habitat and does not support any riparian habitat. Riparian habitat is lowland habitat associated with the bed and banks of a river, stream, or wash. The California Natural Diversity Database (CNDDDB) does not identify any community types as sensitive natural communities tracked by CDFG for the U.S. Geological Survey (USGS) Lovejoy Buttes 7.5-minute quadrangle (CDFG, 2006) and no riparian habitats were identified on site during reconnaissance surveys. The *Antelope Valley Area-wide General Plan* also identifies Joshua tree woodland and creosote bush scrub as sensitive natural communities within the area (Los Angeles County, 1986). Although creosote bushes are present on site, the extent of creosote bush coverage is not sufficient to constitute a habitat designation of creosote bush scrub. Neither of the identified sensitive natural communities is present at the project site. Therefore, the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS; as such, there would be no impact.

Mitigation Measures: None required.

Impact 3.3.3: The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (no impact).

The proposed project site is not located within an area that possesses the proper vegetation (i.e., a preponderance of hydrophytes or “water-loving” plants), soils (i.e., hydric or waterlogged soils), or hydrologic conditions (i.e., inundated either permanently or periodically or saturated during the growing season of the prevalent vegetation) to be defined as a wetland, according to the U.S. Army Corps of Engineers’ (USACE) Wetlands Delineation Manual (USACE, 1987). Therefore, the proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. There would be no impact.

Mitigation Measures: None required.

Impact 3.3.4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (less than significant with mitigation).

The 100-acre Stephen Sorensen County Park is a natural open space area that facilitates wildlife movement to adjacent open areas to the north, southwest, southeast, and east. The *Draft West Mojave Plan* also identifies the park as part of a wildlife linkage that connects the mountains to the south with open areas to the north (BLM, 2005). The project proposes to convert approximately 3.0 acres of this open space area into a gymnasium/community building site, which would nominally reduce wildlife movement within the greater park. However, this loss of acreage would occur adjacent to and act as part of an area in the southeastern portion of the greater park that has already been developed and does not serve any wildlife movement corridors through the greater park. In total, with the 3.0 acres of development added to the existing 15 acre area of existing park development, about 18 acres of the park would be developed after the proposed project, leaving approximately 82 acres in open space to allow for wildlife movement opportunities to be maintained through the greater park. Therefore, the proposed project would not substantially interfere with wildlife movement.

Given the low quality of the habitat present within the project footprint, it does not possess the suitable habitat to act as a native wildlife nursery site. It is possible that migratory and wintering birds and raptors could overwinter or nest on the project site. Construction of the proposed project could result in a significant impact on migrant and/or nesting birds. The proposed project would not significantly affect a native wildlife nursery site with the implementation of **Mitigation Measure BIO-4**; therefore, impacts would be a less than significant.

Mitigation Measures: Implement Mitigation Measure BIO-4.

Significance after Mitigation: Less than significant.

Impact 3.3.5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (no impact).

The project site is located near but not within the Lovejoy Butte Significant Ecological Area (SEA) No. 53 (Los Angeles County, 1986). The SEA is a Los Angeles County land use designation for areas that the County determines to be biologically valuable. Previously, the SEA mapping available for the project Planning Study (Appendix A) was based upon an older mapping program.⁴ Since that time, the Los Angeles County Department of Regional Planning has issued GIS-based maps⁵, which clearly show SEA 53 across Avenue P from the project site. **Figure 3-1** shows the mapped SEA relative to the proposed project area. The County is currently undergoing a SEA update process. Based on communications with the Department of Regional Planning⁶, adoption of the revised SEAs is anticipated July 2009. However, preliminary drafts of the update do not show Stephen Sorensen County Park being affected. As shown in Figure 3-1, the SEA lies south of Avenue P. Projects are subject to all adopted regulations in effect at the time of project approval. Thus, the current project is subject only to the approved SEA boundaries currently in effect.⁷ Based on currently adopted plans and policies, the project would not conflict with any local policies or ordinances protecting biological resources.

Mitigation Measures: None required.

Impact 3.3.6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (no impact).

The proposed project is not located within a federally-adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) or within any other approved local, regional, or state habitat conservation plan. Although the site is located within the *West Mojave Plan* area, which is the largest HCP ever developed in the United States (BLM, 2005), this HCP has not been adopted by the Bureau of Land Management, the lead agency, at this time (BLM, 2006). Therefore, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan at this time and there would be no impact.

Mitigation Measures: None required.

⁴ Sourced in the Planning study at: <http://planning.co.la.ca.us/SEA>, a web page, which no longer exists.

⁵ SEA maps accessed from Los Angeles County Department of Regional Planning
<http://planning.co.la.ca.us/gisData.htm>

⁶ Telephone communications, May 2007 and December 2008, and email correspondence June, 2007, with Mark Herwick, Supervising Regional Planner, Los Angeles County Department of Regional Planning, General Plan Section, December 2008. (213) 974.6427. <http://planning.lacounty.gov/generalplan/default.htm>.

⁷ See <http://planning.co.la.ca.us/gisData.htm>

3.3.5 Cumulative Impacts

Impact 3.3.7: The proposed project would not result in adverse cumulatively considerable impacts on biological resources including loss of habitat for native plant and wildlife species (less than significant).

The proposed approximately 3.0-acre project site is located on a disturbed area dominated by ruderal vegetation and disturbed desert scrub habitat. The project area is located within a 100-acre park containing natural open space areas that facilitate wildlife movement to adjacent open areas to the north, southwest, southeast, and east. The proposed project would develop approximately 3.0-acres adjacent to 15-acre currently developed portion of Stephen Sorensen County Park. The site proposed for development generally has low quality habitat and was not supporting any sensitive species during reconnaissance and species specific surveys conducted on the site.

Due to the low habitat value of the proposed development site, the loss of this disturbed area due to project implementation would be less than significant. Implementation of the proposed project could displace some ground-dwelling creatures and result in the loss of some foraging habitat for avian species; however, the quality of the natural habitat is low. Moreover, mitigation measures have been recommended to reduce any such impacts to a less-than-significant level. The proposed project would not result in any project level significant impacts and would not contribute to any cumulatively considerable impacts. Impacts would be less than significant.

Mitigation Measures: None required.

3.4. Cultural Resources

3.4.1 Introduction

This section presents the environmental setting and impact assessment for cultural and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in California are associated with either Native American or Euro-American occupation of the area. The most frequently encountered prehistoric or historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic resources are standing structures of historic or aesthetic significance that are generally 50 years of age or older (i.e., anything built in the year 1958 or before). In California, historic resources considered for protection tend to focus on architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930). Historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

3.4.2 Environmental Setting

The project area is located in the Antelope Valley, a triangular valley in the western portion of the Mojave Desert, and is bordered on the north by the Tehachapi Mountains, on the south by the San Gabriel Mountains, and on the southwest by the Sierra Pelona Range. Elevations in the Antelope Valley range from 2,270 feet on the valley floor to between 3,000 and 4,000 feet the surrounding foothills.

During the late Holocene, the Antelope Valley was a closed basin, and run-off from the surrounding mountains flowed into series of lakes, now dry for most of the year. In addition to numerous natural springs, additional water sources in the area include several streams that drain from the mountains into the valley as well, such as Big Rock Creek and Little Rock Creek from the San Gabriel Mountains, and Cottonwood Creek and Los Alamos Creek from the Tehachapi Mountains.

The valley floor is composed of unconsolidated quaternary alluvium, made up primarily of silts, sands, poorly developed soils, and gravels (Diblee 1967). Several prominent buttes, composed of igneous and sedimentary rocks, rise from the valley floor. The project area is situated just east of the Lovejoy Buttes, and south of Alpine Butte, the Rocky Buttes, Piute Butte, and Saddleback Butte.

The dominant vegetation on the site comprises a mixture of desert adapted bushes including rabbitbrush (*Chrysothamnus* sp.), big sagebrush (*Artemisia tridentata*), with some creosote bush (*Larrea tridentata*), and non-native Russian thistle (*Salsola* sp.). Many plants were used for food, medicine, fuel and raw materials for weapons, baskets, and shelter by Native American people in prehistoric times. These plant communities also provided habitat for various birds, insects, and reptiles, and mammals such as kangaroo rats, wood rats, ground squirrels, jackrabbit, coyote, spotted skunk, kit fox, bobcat, and mule deer.

Cultural Setting

Prehistoric Background

Paleoindian Period (prior to 10,000 Before Present B.P)

While evidence of early occupation of the Western Mojave is sparse, research at Searles Lake Basin in the eastern Mojave indicate human presence as early as 11,000 years before present. Clovis and Folsom points, scrapers, choppers, and flake tools indicate an emphasis on hunting game, while a lack of ground stone tools, such as millingstones, indicate that the processing of seeds and nuts did not play a large role in Paleoindian subsistence (Lloyd and Price 2007:7).

Lake Mojave Period (10,000-7000 B.P.)

The climate of the Lake Mojave period was generally dry, with occasional moist episodes. A larger number of sites of the period in the Mojave Desert indicate an increase in population. Artifact assemblages are similar to those of the preceding period, again indicating an emphasis on hunting.

Pinto Period (7000-4000 B.P.)

Population of the Western Mojave was sparse at the beginning of the Pinto Period, as extremely warm, dry conditions prevailed and made subsistence difficult. Sites from this period tend to be small, temporary encampments near seasonal streams and now-dry lakebeds (Moratto 1984:411). Artifacts typical of these sites include Pinto points, millingstones, manos, and heavy-keeled scrapers. The lack of technology for processing seeds in Pinto sites suggests an economy based on generalized hunting and gathering. During the arid climate of the early Pinto period, habitation was centered around desert oases and the edge of the desert, where conditions were more temperate and habitable. When the climate became more moist, around 4500 B.C., the lower desert began to be re-occupied (Moratto 1984:414).

Gypsum Period (4000 - 1500 B.P.)

Material culture of the Gypsum period is exemplified by certain types of projectile points, including Humboldt Concave Base, Gypsum Cave, and Elko-Eared or –corner notched points, as well as flake scrapers, drills, choppers, shell beads, bone awls, and hammerstones. Manos and millingstones became more common during this period as well, indicating increased processing of hard seeds (Moratto 1984:416).

Some artifacts dated to the Gypsum period, such as split-twig figurines and pottery of southwestern origin or style, indicate the influence of Southwestern peoples. In addition, there is evidence of limited contact with peoples of the California coast, with whom they may have traded for such objects as shell beads.

Saratoga Springs Period (1500-800 B.P.)

The Saratoga Springs period is characterized by cultural diversification and strong regional developments. In the Antelope Valley, the Saratoga Springs period was marked by the presence of large village sites, containing middens and cemeteries. These sites contain large amounts of artifacts of coastal origin, including shell beads and steatite items (Moratto 1984:423). Unlike the rest of the Mojave Desert region, pottery is rarely found at sites in the Antelope Valley, indicating a lack of contact with Southwestern cultures. Interestingly, a major exception to this generalization is CA-LAN-192, where large amounts of pottery were found (Lloyd and Price 2007:9)

In addition, this period marks the transition from the use of the dart and atlatl to the use of the bow and arrow, with Rose Spring and Cottonwood being characteristic arrow points (Lloyd and Price 2007:9)

Protohistoric and Ethnographic Period (800 B.P. - European Contact)

As in the preceding period, artifacts from Antelope Valley sites indicate stronger ties with coastal peoples than with cultures of the Southwest. Similarly, the presence of artifacts such as millingstones and manos, and mortars and pestles, indicate that the gradual shift from an emphasis on hunting to collecting continued during this late period (Moratto 1984:430).

Native groups living in the project area at the time of European contact were the Serrano and Kitakemuk. Little is known about these groups at the time of contact, but both groups likely lived in permanent winter villages and smaller mobile groups in the summer. They hunted and foraged for pinon nuts, mesquite, yucca, and other seasonal foods. Each village was ruled by a leader whose power was hereditary, and villages seem to have been politically independent of one another. Inter-marriage between villages and larger tribes was common, and intertribal relations were generally friendly (Blackburn and Bean 1978; Price et al. 2004).

Historic Background (1770s □ present)

The first Europeans known to have ventured into the Antelope Valley were Spanish explorers and missionaries in the 1770s, including Captain Pedro Fages and Father Francisco Garcés. In the 1820s-1840s, American trappers such as Jedediah Smith and Kit Carson began exploring the valley (Price et al. 2004).

With the advent of European exploration and the establishment of the mission system, many Serrano and Kitanemuk were moved to missions in the early 19th century, where disease and hard labor resulted in a rapid drop in population.

In 1848, Fort Tejon was established in the Grapevine Canyon, the main route between the Central Valley and Southern California. And in 1850, California achieved statehood and became part of the United States. However, the Antelope Valley remained mostly undeveloped until the 1870s, when the Southern Pacific Railroad finished its line through the valley, more settlers moved to the area. The planned community of Lake Los Angeles was established in 1974, the first large-scale development in the area. An artificial lake was also created near the town, which dried up in 1981.

Project History and Methodology

The current project area is encompassed by CA-LAN-192, a large prehistoric site that has been investigated since the 1920s by a series of researchers (Padon and Love 2004:4-8; Price et al. 2005:1.4-1.5; Lloyd 2005, Lloyd *in prep*; Price et al. *in prep*). It consists of a large midden deposit, copious amounts of ground stone, flaked stone tools and debitage¹, shell beads and other ornaments, human remains, bedrock milling features, and other artifacts. CA-LAN-192 is considered eligible for inclusion on the NRHP under Criterion D (Padon and Love 2004:15; Price et al. 2005: 5.1-5.4) and is, therefore, considered a “historic property” per 36 CFR 800.16(l). Previous work at CA-LAN-192 has shown that, despite substantial disturbance to the site over the past 100 years, intact archaeological deposits are present adjacent to the expansion area.

In 1968, prior to County ownership of the site and prior to establishment of the park, a prehistoric cemetery was exposed and partially destroyed at CA-LAN-192 during massive excavations for the artificial Lake Los Angeles. The cemetery appears to be spatially restricted to the south-central portion of the CA-LAN-192 site (outside of the project area), and was mostly covered

¹ Debitage is defined as “lithic debris and discards found at the sites where stone tools and weapons were made.”

under fill during the original park construction. None of the subsequent five excavations and monitoring efforts has identified any human remains outside of the 1968 mortuary area.

In 2005, the Los Angeles County Department of Public Works (DPW) expanded the area of park improvements from 3 to 15 acres using County general and federal funds provided by the Department of Housing and Urban Development (HUD) and administered through a grant by the Community Development Commission of the County of Los Angeles (CDC). The expansion was, therefore, considered an undertaking as defined in 36 CFR 800.16(y) and was subject to review under Section 106 of the National Historic Preservation Act (NHPA). In 1999, CDC entered into a Programmatic Agreement (PA) with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation to provide procedures for the implementation of Section 106. The 2005 park expansion was subject to the terms of that PA.

Pursuant to the PA, the County of Los Angeles had the responsibility, on behalf of the HUD, to develop treatments to avoid, minimize, or mitigate the adverse effects of its undertaking on CA-LAN-192 (36 CFR 800.1[a]). When preservation in place is not feasible, treatment of adverse effects on archaeological sites is frequently accomplished through mitigative data recovery excavation. In the case of CA-LAN-192, however, due to the several previously conducted but unreported excavations and disturbed site context, additional data recovery excavation was not considered the most effective method of treating the effects of the project, and a detailed technical analysis of the multiple existing collections from the site was required as one of the mitigation measures in lieu of additional data recovery on-site (Price et al. 2005:5.6-5.10). Other mitigation measures included construction monitoring, emergency excavations if intact deposits were discovered during construction, and thorough technical reporting of all finds. The SHPO concurred in these findings and recommendations (see SHPO letter dated 20 April 2005, in **Appendix D**). The County retained Applied EarthWorks, Inc. (Æ) to implement the cultural resources mitigation measures. Reports including the results of the technical analysis and collections from the site are available at the offices of the LACDPW.

During the course of the construction monitoring, a previously unidentified and intact portion of CA-LAN-192 was uncovered adjacent to Avenue P during mechanical excavation for the parking lot retaining wall. Per the agreed upon mitigation measures, construction in the vicinity of the find was temporarily halted while Æ conducted emergency excavations, which constituted “treatment” for the adverse effects caused by the inadvertent uncovering of the deposit. Documentation of the technical analyses, construction monitoring, and emergency excavations are currently being completed (Price et al. in prep).

In September 2005, Æ surveyed a 100-acre project area that encompassed the current expansion. This survey identified a sparse scatter of prehistoric cultural material adjacent to the known boundaries of CA-LAN-192, which were subsequently enlarged to encompass the newly identified material (Lloyd 2005). However, the pedestrian survey was not able to ascertain whether the identified surface artifacts represented an intact cultural deposit. The footprint of the current expansion is located within the enlarged site boundaries.

Æ conducted an additional geoarchaeological and buried site testing study within the expansion area in October-November 2007 to determine whether the scattered surface artifacts observed during the 2005 survey remained *in situ* or were redeposited, and whether intact subsurface cultural deposits are present within the project area. To expose stratigraphy and identify buried surfaces, Æ excavated a series of parallel backhoe trenches across the width and breadth of the project area. At least one sidewall from each of the trenches was observed, recorded, and interpreted by the project archaeologist and a sample (approximately 0.075 m³) of each identified sedimentary stratum within each trench was screened through 1/8-inch mesh to search for artifacts.

The results of the study indicate that intact cultural deposits are not preserved within the proposed project area. No cultural strata were identified and no prehistoric artifacts were observed. On-site sediments generally correspond to the Cajon Series (Soil Conservation Service 1969), which are formed in granitic alluvial fans with slopes between 9 and 15 percent or steeper. Hummocks of wind deposited sand 3–4 feet high are common in these areas and may cover as much as 80 percent of the surface. Sheetwash and debris flows are common in areas between aeolian materials, occurring as thin layers of granitic gravel. Granitic outcrops are frequently associated with the Cajon Series and depth to bedrock is between 4 and 5 feet. Cajon Series sediments are not representative of stable landscapes typically associated with long term occupation and midden development, such as documented at CA-LAN-192.

Observations made during Æ's geoarchaeological study are consistent with the history of the Lovejoy Springs area. In general, the trench profiles exhibit mechanical disturbances overlying substantial erosion activity and decomposing bedrock. These profiles are expected given the amount of documented construction in the area and the steep slope up to Lovejoy Buttes to the west. Previous analyses of on-site mechanical activity (Padon and Love 2004:4-5; Price et al. 2005:4.1-4.6) have shown that, prior to County ownership of the parcel, cultural strata were removed in many areas and, in some cases, relocated to other parts of the site. Further, in some areas cultural and noncultural strata are mixed, and imported fill has been added. Specific to the project area, Padon and Love (2004:5) report that "(In 1992) the northwest edge of the artificial lake was removed by heavy equipment and spread over the bottom of the now-dry lake bed."

The artifacts identified on the surface of the project area during the 2005 survey have been redeposited by these previous episodes of human disturbance and lack contextual integrity. They cannot be dated accurately or associated with a particular occupation or site component, and, therefore, do not hold significant historical associations or data potentials. For these reasons, the proposed project will not have an adverse effect on historic properties (per 36 CFR 800.5) and will not have a significant impact on historical resources (per CEQA) (Lloyd, *in prep*).

Native American Contact

The Native American Heritage Commission (NAHC) was contacted in 2004 to request a database search for sacred lands or other cultural properties of significance to local Native Americans. The Sacred Lands Files database search performed by the NAHC did not indicate the presence of Native American sacred lands in the project area.

The Commission also provided a list of people or organizations that might have specific information regarding cultural resources in the project area, or who may have an interest in the current project.

Follow-up consultation was conducted in October 2004 and again in November 2007 with those tribes and individuals indicated by the NAHC. This consisted of a letter describing the proposed project and a map indicating the project area. Recipients were requested to reply with any information they are able to share about Native American resources that might be affected by the proposed project. Follow-up phone calls were also made with each individual. Those contacted were: San Fernando Band of Mission Indians, John Valenzuela, Chairperson; San Manuel Band of Mission Indians, Deron Marquez, Chairperson and Bernadette Brierty, Cultural Resources Coordinator; Ron Adrade; Charles Cook; Randy Guzman-Folkes; Ali Kashani; Beverly Salazar-Folkes; and Henry Williams.

Many of the respondents emphasized the importance of adequate archaeological evaluation and the presence of a Native monitor. Harold Williams, a member of the Kawaiisu tribe, and Randy Guzman-Folkes, of the Chumash-Tataviam, were retained by Applied Earthworks as monitors.

3.4.3 Regulatory Framework

Numerous laws and regulations require federal, State, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources, Public Resources Code (PRC) 5024, are the primary federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance.

Federal

National Register of Historic Places

The National Register of Historic Places, the nation's master inventory of known historic resources, is administered by the National Park Service in conjunction with the State Historic Preservation Office. The National Register includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The National Register criteria and associated definitions are outlined in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation* (NPS, 1990). Bulletin 15 indicates that resources (i.e., structures, sites, buildings, districts, and objects) over 50 years of age can be listed in the National Register provided that they meet the evaluative criteria described below.

However, properties under 50 years of age that are of exceptional importance or are contributors to a district, and that also meet the evaluative criteria, can also be included in the National Register. Resources can be listed individually in the National Register or as contributors to a historic district.

The National Register includes four criteria under which a structure, site, building, district or object can be considered significant for listing in the register. These include:

- Resources that are associated with events that have made a significant contribution to the broad patterns of history; or
- Resources that are associated with the lives of persons significant in our past; or
- Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Resources that have yielded or may likely yield information important in prehistory or history.

A resource may be considered eligible for listing in the National Register if it meets one or more of the above-listed criteria for significance *and* possesses integrity. Historic properties must retain their integrity to convey their significance. Although the evaluation of integrity is sometimes a subjective judgment, it must be grounded in an understanding of the resource's physical features and how they relate to its significance. The National Register recognizes seven aspects or qualities that define integrity; location, design, setting, materials, workmanship, feeling, and association.

National Historic Preservation Act

Federal involvement in a local project through permitting, approval, or funding requires project compliance with Code of Federal Regulations (CFR), Section 36, Part 800, Protection of Historic Properties. If future Master Development Plan projects require a permit from a federal agency (e.g., the U.S. Army Corps of Engineers), completion of cultural resource studies in compliance with Section 106 of the National Historic Preservation Act. Results of these studies would require concurrence from the State Historic Preservation Officer (SHPO) and would be supplied to the Corps or other federal permitting/funding agency for incorporation into its NEPA process.

State

California Register of Historical Resources

The California Register of Historical Resources is a listing of resources that are significant within the context of California's history. The California Register is a statewide program of similar scope to the National Register. All resources listed in or formally determined eligible for the National Register are also eligible for listing in the California Register. In addition, properties designated under municipal or county ordinances are also eligible for the California Register. A

historic resource must be significant at the local, state, or national level under one or more of the following criteria defined in the California Code of Regulations (CCR), Title 14, Chapter 11.5, Section 4850.

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
- It is associated with the lives of persons important to local, California, or national history; or
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The California Register criteria are similar to National Register criteria, and are tied to CEQA, as any resource that meets the above criteria is considered a historical resource under CEQA.

California Environmental Quality Act Statute and Guidelines

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts on cultural resources, which include all resources listed in or formally determined eligible for the National Register, the California Register, or local registers.

CEQA requires the lead agency to consider the effects of a project on archaeological resources and to determine whether any identified archaeological resource is a historical resource (i.e., if the archaeological resource meets the criteria for listing in the California Register) (CEQA Guidelines Sections 15064.5[a][1] and [3] and [c][1] and [2]). An archaeological resource that qualifies as a historical resource under CEQA generally qualifies for listing under Criterion D of the California Register (CEQA Guidelines Section 15064.5[a][3][D]). An archaeological resource may qualify for listing under Criterion D when it can be demonstrated that the resource has the potential to significantly contribute to questions of scientific or historical importance. Archaeological resources that are not historical resources according to the above definitions may be “unique archaeological resources,” as defined in Public Resources Code Section 21083.2, which generally provides that “non-unique archaeological resources” do not receive any protection under CEQA. If an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of a project on those resources are not considered significant.

CEQA defines a historical resource as a resource that meets any of the following criteria:

- A resource listed in, or determined to be eligible for listing in, the National Register or California Register.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, unless the *preponderance* of evidence demonstrates that it is not historically or culturally significant.
- A resource identified as significant (e.g., rated 1 through 5) in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g) (Department of Parks and Recreation Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered “historically significant” if it meets the criteria for listing in the California Register (CEQA Guidelines Section 15064.5).
- A resource that is determined by a local agency to be historically or culturally significant even though it does not meet the other four criteria listed here (e.g., Article 10 and Article 11 of the San Francisco Planning Code).

According to the CEQA Guidelines (Section 15064.5[a][3]), a resource is generally considered historically significant if the resource meets the criteria for listing in the California Register (Public Resources Code Section 5024.1, CCR, Title 14, Section 4852). A historical resource is defined as any site that:

- Is listed in, or determined to be eligible by the State Historical Resources Commission for listing in the California Register, or is determined to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and
- Meets any of the four criteria described on page 3.4-9:

In addition, a resource included in a local register of historical resources, as defined by Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, is presumed to be historically or culturally significant. Archaeological resources may be historical resources under CEQA.

CEQA Guidelines Section 15064.5 provides that, in general, a resource not listed in state or local registers of historical resources shall be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register. This section also provides standards for determining what constitutes a “substantial adverse change” on archaeological or historical resources, including physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][1]). The significance of a historical resource is considered to be materially impaired when a project demolishes or materially alters in an adverse manner those characteristics that convey its historical significance and that justify its inclusion on a historical resource list (CEQA Guidelines 15064.5[b][2]).

CEQA Guidelines Section 15064.5(b)(3) indicates that projects that are consistent with the *Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* generally “shall be considered as mitigated to a level of less than a significant impact on the historic resource”.

Senate Bill 18

Effective January 2005 and in conformance with Senate Bill 18, which was signed into law by the Governor of California in September 2004, on or after March 1, 2005, local governments are required to consult with tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to “provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places” (State of California, 2005).

According to the *Tribal Consultation Guidelines: Supplement to General Plan Guidelines* (2005), the following identifies the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the Native American Heritage Commission (NAHC)) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government’s jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county’s jurisdiction. The referral must allow a 45-day comment period (Government Code §65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code §65092).

Local

County of Los Angeles General Plan

Specific policies within the current Los Angeles County General Plan that apply to cultural resources can be found in Conservation & Open Space, specifically Sub-section VII (Historical, Cultural and Paleontological Resources).

GOAL C/OS 12.1: PROTECTED CULTURAL HERITAGE RESOURCES

- Policy C/OS 12.1: Support an inter-jurisdictional collaborative system that protects and enhances the County’s cultural heritage resources.
- Policy C/OS 12.2: Support initiatives that improve the effectiveness of the Los Angeles County Landmarks Commission and the preservation of historic buildings.

Policy C/OS 12.3: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).

Policy C/OS 12.4: Promote public awareness of the County's cultural heritage resources.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. This document does not contain policies that are applicable; please see the Los Angeles County General Plan for policies applicable to the proposed project.

Paleontological Resources

Federal

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally-owned or federally-managed lands or involves a federal agency license, permit, approval, or funding. Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (PL 59-209; 16 United States Code 431 et. seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands.

State

Paleontological resources are also afforded protection by CEQA. Appendix G (Part V) of the *CEQA Guidelines* provides guidance relative to significant impacts on paleontological resources, stating that a project will normally result in a significant impact on the environment if it will "...disrupt or adversely affect a paleontologic resource or site or unique geologic feature, except as part of a scientific study." Section 5097.5 of the Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

Professional Standards

The Society for Vertebrate Paleontology (SVP) has established standard guidelines for acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional paleontologists in the nation adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most California state regulatory agencies accept the SVP standard guidelines as a measure of professional practice.

3.4.4 Impacts and Mitigation Measures

Significance Criteria

According to Appendix G of the CEQA Guidelines, the proposed project could have a significant impact on cultural resources if it would result in any of the following:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources;
- A substantial adverse change in the significance of a unique archaeological resource;
- Disturbance or destruction of a unique paleontological resource or site or a unique geologic feature; or
- Disturbance of any human remains, including those interred outside of formal cemeteries.

CEQA provides that a project may result in a significant environmental effect if it would cause a substantial adverse change in the significance of a historical resource (Public Resources Code, Section 21084.1). CEQA Guidelines Section 15064.5, subdivision (b)(1), defines a “substantial adverse change” in the significance of a historical resource to mean “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.”

CEQA Guidelines, Section 15064.5, subdivision (b)(2), defines “materially impaired” for purposes of the definition of “substantial adverse change...” as follows:

The significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Project Impacts

Impact 3.4.1: The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 (less than significant with mitigation).

Previous work identified a sparse surface scatter of prehistoric cultural material within the project area. The results of Æ's geoarchaeological study indicate that the artifacts are redeposited and lack integrity. However, previously unidentified and intact cultural deposits were identified *under* Avenue P during construction monitoring for previous park improvements. This area was not investigated during the current geoarchaeological study due to the hazards associated with trenching into the road base. Therefore, in order to ensure compliance with all applicable requirements, potential project effects are proposed to be mitigated by having an archaeologist and a Native American monitor on site during any subsurface construction activity, and conducting mandatory cultural resource training for all project personnel involved in subsurface excavations.

Mitigation Measures:

CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment. The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.

CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist shall provide a mandatory cultural resource orientation to all construction personnel working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.

Significance after Mitigation: Less than significant.

Impact 3.4.2: The proposed project would not cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5 (less than significant).

Development of the Stephen Sorensen County Park Gymnasium/Community Building Project would not have a substantial adverse effect on the significance of unique archaeological resources. The current project area is wholly within the identified boundaries of CA-LAN-192, a historical resource under the CEQA. Therefore, any newly exposed archaeological material encountered during project activity will be considered a component of CA-LAN-192 and not an unevaluated archaeological resource.

Mitigation Measures: None required.

Impact 3.4.3: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (less than significant with mitigation incorporated).

Paleontological resources, or fossils, are the remains, imprints or traces of prehistoric animals and plants preserved in rocks and sediments. Fossils are considered nonrenewable resources because the organisms from which they derive typically no longer exist, and, once destroyed, a fossil can never be replaced. The significance of any particular fossil or fossiliferous formation depends on its rarity, regional uniqueness, and its diagnostic or taxonomic value. Fossils are important scientific and educational resources because of their use in: (1) documenting the presence and evolutionary history of particular groups of now-extinct organisms, (2) reconstructing the environments in which these organisms lived, and (3) determining the relative ages of the strata in which they occur and of the geologic events that resulted in the deposition of the sediments that formed these strata and in their subsequent deformation. Fossils also can be deemed important if they are unusual, spectacular, or rare and in danger of being depleted or destroyed.

Paleontological resources are afforded protection under various federal, state, and local environmental laws and guidelines. Significance of paleontological resources can be rated from high to low depending upon the resource sensitivity of impacted rock formations. The Sorensen Park Project is located in an area that does not contain rock outcrops or geologic formations likely to harbor significant fossil deposits. A paleontological records search conducted by the Natural History Museum of Los Angeles County (**Appendix E**) did not locate any vertebrate fossils within the project boundaries. Further, bedrock in the project area consists of igneous rocks which do not contain fossils and surface and near-surface sediments consist of younger Quaternary Alluvium which “usually do not contain significant vertebrate fossils.” Thus the area is considered to be of low sensitivity, and potential impacts are considered to be less than significant.

While fossils are not expected to be discovered during project construction, nevertheless significant fossils could be discovered during excavation activities, even in areas with a low likelihood of occurrence. Fossils encountered during excavation could be inadvertently damaged. However, implementation of **CUL-3** would minimize this impact to a less-than-significant level.

Mitigation Measures:

CUL-3: Exposure of Previously Unidentified Paleontological Resources: In the event that paleontological resources are discovered, the project proponent (depending upon the project component) will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in *CEQA Guidelines* Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to the project proponent for review and approval prior to implementation.

Significance after Mitigation: Less than significant.

Impact 3.4.4: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries (less than significant with mitigation incorporated).

As noted above, in 1968, prior to County ownership of the site and prior to establishment of the park, a prehistoric cemetery was exposed and partially destroyed at CA-LAN-192 during massive excavations for the artificial Lake Los Angeles. The cemetery appears to be spatially restricted to the south-central portion of the CA-LAN-192 site (outside of the project area), and was mostly covered under fill during the original park construction. As noted earlier, none of the subsequent five excavations and monitoring efforts has identified any human remains outside of the 1968 mortuary area. However, the possibility exists that human remains could be uncovered during construction of the proposed project.

Mitigation Measures:

CUL-4: Exposure of Previously Unidentified Human Remains. In concert with Measures CUL-1 and CUL-2, mitigation for exposure of previously unidentified human remains is as follows - if human remains are found, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American who will then serve as consultant on how to proceed with the remains (e.g. avoidance, reburial).

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3.4.5: The proposed project would not significantly impact cultural and historic resources on a cumulative level (less than significant).

Cultural Resources

The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area². Based on the list provided, there are no related projects within a five-mile radius of the proposed project. Any future projects project would be reviewed by the lead agency for potential impacts and required mitigation measures, if any, under CEQA. There are no major pending or ongoing projects within the immediate area. Implementation of the mitigation measures developed above will reduce the project impacts to a less than significant level. With the implementation of these mitigation measures, the cumulative impacts to cultural resources will be less than significant.

Paleontological Resources

From a cumulative impact perspective, grading and excavation activities associated with the project could contribute to the progressive loss of fossil remains, as-yet unrecorded fossil sites, associated geological and geographic site data, and fossil-bearing strata. However, as described above, with implementation of the proposed mitigation measures, project impacts would be less than significant. It would also be expected that any other future related projects would implement such mitigation measures on a case-by-case basis if deemed appropriate as part of their environmental review. Thus, with implementation of the mitigation measures listed above, cumulative impacts associated with paleontological resources would be less than significant.

Mitigation Measures: None required.

² Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.5. Geology

3.5.1 Introduction

This section describes the known topographic, geologic, soil, and seismic conditions at the proposed project site. It evaluates the potential for the project to be impacted unfavorably by seismic and/or geological events that will affect the people or structures. Information in this section is based upon the Preliminary Geotechnical Investigation Report, prepared on May 22, 2007 by Leighton Consulting, Inc (**Appendix F**). The potential impacts are discussed and evaluated. Additionally, the proposed mitigation measure(s) for each impact is identified where applicable.

3.5.2 Environmental Setting

Regional Geology

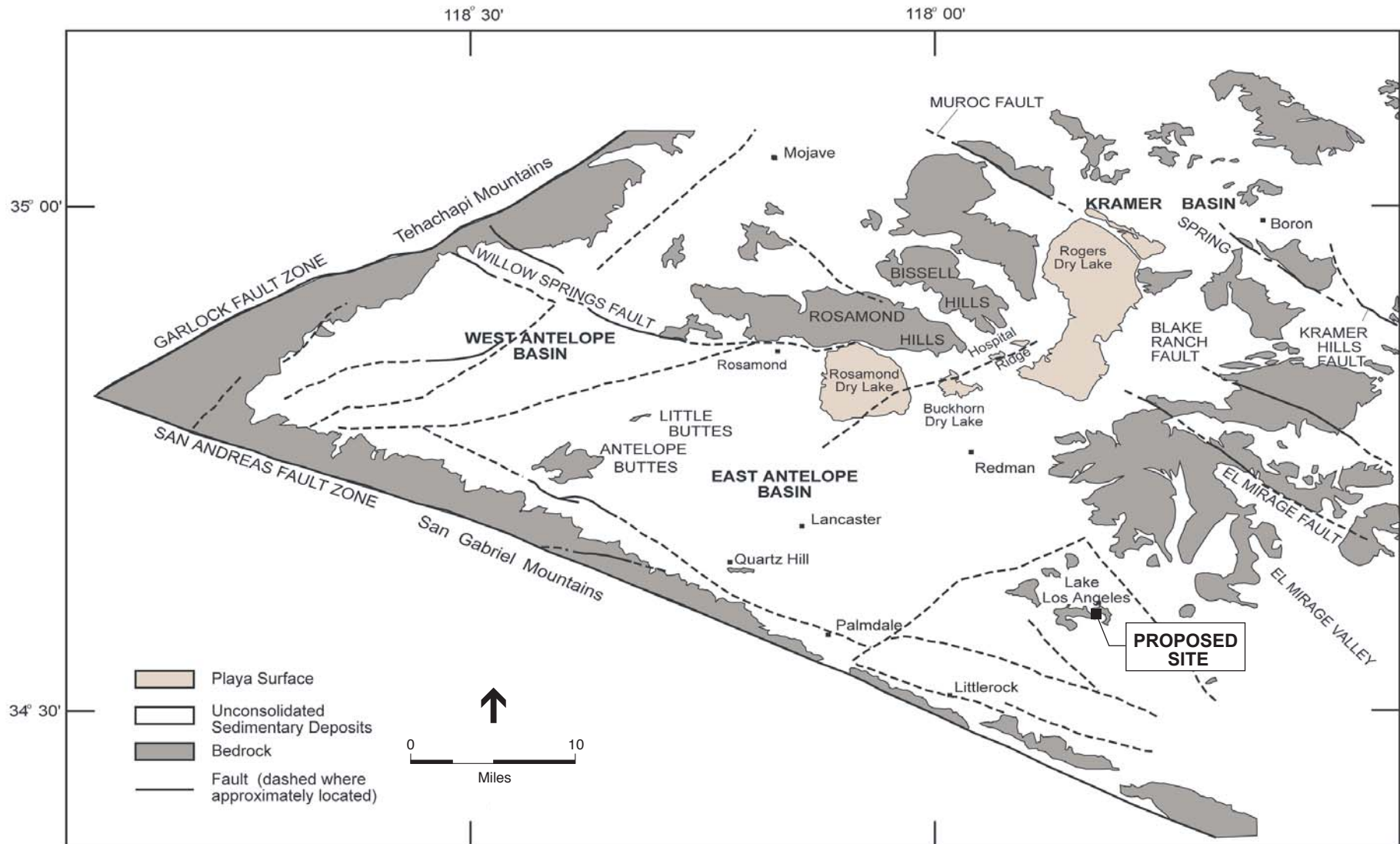
The project site is located within Antelope Valley in the western portion of the Mojave Desert geomorphic province. The rocks of the Mojave Desert geomorphic province are some of the oldest rocks in California. Younger strata are comprised of marine and non-marine sedimentary, volcanic, and metamorphic rocks (ESA, 2006). The province is bounded by the San Andreas Fault and San Gabriel Mountains to the southwest, the Garlock fault and Tehachapi Mountains to the northwest, and San Bernardino to the east. It resides in the southeast quarter of Section 16, Township 6 North and Range 9 West on the Lovejoy Buttes USGS 7.5 topographic map. The site has floor elevations ranging from 2,640 to 2,700 feet above mean sea level (amsl).

Topography

Topography of this province is controlled by the San Andreas and Garlock Fault systems and consists largely of isolated mountain ranges among desert plains (see **Figure 3-2**). The site is part of the Antelope Valley which is generally flat but contains small hills and buttes and has a very slight gradient towards the north. The presence of the Lovejoy Buttes¹ and Lovejoy Springs also characterize the topography of the area.

Adjacent to the project site, there is a group of closely packed buttes, known as the Lovejoy Buttes, which rise up to 185 ft above the floor elevation (2,800 feet above mean sea level). The two of the buttes in the western portion of the site have peaks that rise to elevations 2,775 and 2,825 feet amsl and possess slopes of 50 to 100 percent in the uppermost elevations of the butte (see **Figure 3-3**). From these peaks, the slope percentage quickly becomes 0 to 2.5 percent

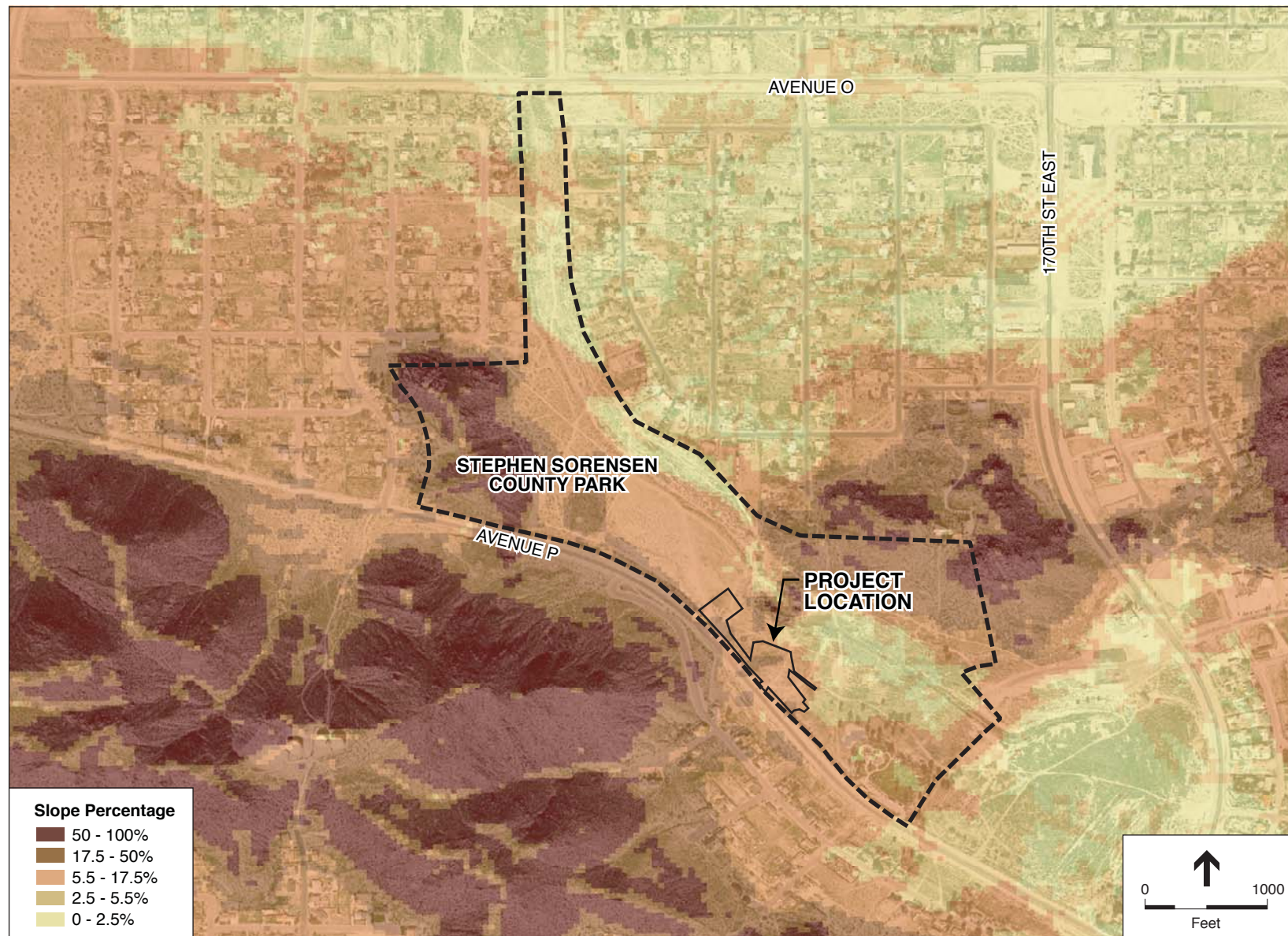
¹ The buttes into the western and northeastern areas of the site are part of the Lovejoy Buttes and would be considered unique geologic features as they rise above surrounding elevations. These buttes possess granitic rock outcrops that define the character of the Lovejoy Buttes area. Figure IV-4 in the Planning Study (Appendix A) illustrates unique geologic feature constraints at the site and the determined level of constraint, including these buttes. At Lovejoy Springs, granite cliffs on either side of the wash could be considered significant unique geologic features of the site (see Figure IV-4 in the Planning Study).



SOURCE: Londquist, 1993.

Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237

Figure 3-2
Faults in the Antelope Valley



SOURCE: GlobeXplorer, ESA 2005.

Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237

Figure 3-3
Slope (Percent)

heading towards the interior of the site, as shown in Figure 3-3. The wash to the east is at elevations between 2,650 to 2,675 feet amsl. To the southwest of the southwestern most portion of the butte to the northeast, Lovejoy Springs can be found. Lovejoy Springs is a dry spring that possesses granite cliffs that rise 15-20 feet above the wash on either side and these cliffs possess slopes of 50 to 100 percent (see Figure 3-3).

Site Geology

At the project site, subsurface materials of the low areas consist of younger alluvial deposits and dune sands characterized by unconsolidated sand and angular boulders, cobbles, and gravels, with silt and clay (Ponti, et al., 1981). The Lovejoy Buttes which partially reside within the project boundary consist of granite and adamellite (i.e., a type of rock formed by volcanic activity).

The Antelope Valley is composed of thick deposits of alluvial and lacustrine (lakebed) materials that have filled the West Antelope, East Antelope, and Kramer structural basins. The site's soils are derived from the downslope migration of loess² and alluvial materials³. The soils for the bulk of the site consist of the Hesperia-Rosamond association and are a combination of moderately permeable alluvial deposits, derived from erosion of the mountains on the perimeter of the alluvial plain. The moderately permeable areas consist of sands, silty sands, and gravels in the many alluvial fans at the edges of the basin (ESA, 2006).

In general, soils within the project area are characterized as being relatively level, well-drained, moderately to highly alkaline⁴, and contain considerable areas that are saline affected⁵ (NRCS, 1969). A majority of the soils contain calcareous materials⁶ in the sub-surface horizons of the profile and consist of variably stratified loams. Both the high pH and the saline concentrations of the soils inhibit plant growth and the relatively dry climatic regime of the area further contributes to this. Overall, the soils within the assessment area lack substantial amounts of organic matter and are characterized by a relatively low inherent fertility making them more susceptible to erosion and displacement (NCRS, 1969).

3.5.3 Seismic Hazards

Seismic hazards include those hazards that could reasonably be expected to occur at the project site during a major earthquake on any of the regional active faults. Some hazards can be more severe than others, depending on the location, underlying materials, and level of ground shaking.

² A wind derived deposit of fine sediments.

³ The alluvial materials are mainly from granitic rock sources originating along the eastern slopes of the Tehachapi and San Gabriel Mountains.

⁴ Alkaline – Any soil that has a pH of greater than 7.

⁵ Saline affected soils have a concentration of salts (such as table salt, gypsum, Epsom salts, baking soda) that is high enough to retard plant growth and prevent seed germination.

⁶ Calcareous materials in the soils enhance water retention and drainage in addition to cooling them.

Regional Faults

Southern California contains both active and potentially active faults⁷ and is considered a region of high seismic activity. There are several regional faults capable of producing significant ground shaking in the area including the San Andreas, Garlock, San Gabriel, and Sierra Madre (San Fernando) Faults. Figure 3-2 illustrates the faults in the Antelope Valley, including the major San Andreas and Garlock Faults as well as other minor faults such as the Willow Springs Fault, Murloc Fault, Kramer Hills Fault, El Mirage Fault, and other unnamed faults. Major seismic events on any of these active faults could cause significant ground shaking and surface fault rupture.

In the past 100 years, several earthquakes of magnitude 5.0 or larger have been reported on the active San Andreas, Garlock, and San Fernando fault systems. In Southern California, the last earthquake exceeding Richter magnitude 8.0 occurred in 1857. Much more frequent are smaller tremors such as the moderate 1992 Landers earthquake (Richter magnitude 7.0), and 1971 San Fernando and 1994 Northridge earthquakes (both Richter magnitude 6.7). These earthquakes caused extensive damage throughout Southern California.

San Andreas Fault

The San Andreas Fault Zone is a major structural feature that forms at the boundary between the North American and Pacific tectonic plates. It extends from the Salton Sea in Southern California near the border with Mexico to north of Point Arena, where the fault trace extends out into the Pacific Ocean. In the south, the San Gabriel Mountains roughly denote the path of the San Andreas Fault. The San Andreas Fault is a strike-slip-type fault⁸ that traverses Los Angeles County and has experienced movement within the last 150 years.

Garlock Fault

The Garlock fault is the other major fault in the project vicinity. It is an east to northeast-striking strike-slip fault that forms the boundary between the Tehachapi Mountains, Sierra Nevada, and Basin and Range province on the north and the Mojave Desert province to the south. The fault spans 150 miles and is one of the most obvious geologic features in southern California. While no earthquake has produced surface rupture on the Garlock fault in historic times, there was a magnitude 5.7 along the fault zone, near the town of Mojave in 1992. The on-going seismicity associated with the fault zone makes it likely that the Garlock fault zone will experience seismic activity again in the future.

⁷ An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. Sufficiently active is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 1997).

⁸ "Strike-slip" faults primarily exhibit displacement in a horizontal direction, but may have a vertical component. Right-lateral strike slip movement of the San Andreas Fault, for example, means that the western portion of the fault is slowly moving north while relative motion of the eastern side is to the south.

Llano Fault

The closest fault to the project area is the Llanos Fault, see **Table 3.5-1**. It is a 4.3 mile splay of the San Andreas Fault, which could produce some groundshaking or be triggered by an event on one of the other faults. It is a reverse fault that dips to the southwest. The faulting generally does not extend to the surface, but the fault is expressed at the surface by folded Quaternary sediments that form a 30-foot-high scarp.

**TABLE 3.5-1
FAULT ZONES IN THE PROJECT VICINITY**

Fault Zone	Distance from the Project Area	Regency of Faulting^a	Slip Rate^b (mm/year)	Maximum Moment Magnitude
San Andreas	10 miles south	Historic	34	6.8 to 7.9
Garlock	50 miles northwest	Historic, Holocene	6	6.5 to 7.1
Sierra Madre-San Fernando	30 miles southwest	Historic	2	6.7 to 7.0
Llano	5 miles southwest	Holocene	NA	NA
San Gabriel	25 miles south	Holocene	1	7.0

^a Regency of faulting from Jennings, 1994. Historic: displacement during historic time (within last 200 years), including areas of known fault creep; Holocene: evidence of displacement during the last 10,000 years; Quaternary: evidence of displacement during the last 1.6 million years; Pre-Quaternary: no recognized displacement during the last 1.6 million years (but not necessarily inactive). Multiple periods are listed when different branches have shown displacement for different geologic periods.

^b Slip Rate □ Long-term average total of fault movement including earthquake movement, slip, expressed in millimeters.

SOURCES: Hart, 1997; Jennings, 1994; Peterson et al., 1996.

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults or even along different segments of the same fault. Ground rupture is considered more likely along active faults. No special hazard zones delineated by the 1972 Alquist-Priolo Special Studies Zone Act are located within the project area. Since no mapped active or potentially active faults are known to pass through the project area, the potential risk from fault rupture is considered very low.

Ground Shaking

Areas most susceptible to intense ground shaking are those located closest to the earthquake-generating fault, and areas underlain by thick, loosely unconsolidated and saturated sediments. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. Areas underlain by bedrock typically experience less severe ground shaking than those underlain by loose, unconsolidated materials.

The unconsolidated nature of underlying soils in portions of the project area, although located relatively distant from faults, can intensify ground shaking. Ground shaking from a significant

event on one of the major faults would likely cause some degree of damage to project facilities; however, well-designed structures would not be anticipated to experience serious damage or collapse.

Liquefaction

Liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. Soil liquefaction causes ground failure that can damage roads, pipelines, buildings with shallow foundations, and levees. Liquefaction can occur in areas characterized by water-saturated, cohesionless, granular materials at depths less than 40 feet. High ground water levels increase the likelihood of liquefaction. Within the project area, a historic high ground water level has been reported at 10 to 20 feet. However, recent measurement indicated the presence of ground water only in the eastern portion of the property at 4.5 ft depth. According to the CGS, the refined project areas is identified as a Seismic Hazard Zone for susceptibility to liquefaction.

Landslides and Slope Failure

A landslide is a mass of rock, soil, and debris displaced down-slope by sliding, flowing, or falling. The likelihood of landslides is dependent on the slope and geology as well as the amount of rainfall, excavation, or seismic activities. Removing the lower portion of a slope decreases or eliminates the support that counters the lateral motion in a slope that would lead to its failure. Shaking during an earthquake may lead materials in a slope to lose cohesion and collapse. The project area is relatively flat and the potential for landslides is considered very low.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During the prolonged ground shaking of an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, uncompacted, and variable sandy sediments above the water table) due to the rearrangement of soil particles. Settlement can occur uniformly or occur differentially within the same land segment. Areas underlain by artificial fill would be susceptible to this type of settlement. Undocumented artificial fill was not found in the project area. However, quaternary alluvial materials consisting of silty sand and sandy silt with clay were observed. Beneath the alluvium, there is quartz monozonite bedrock. The soils in the project area are porous and reside in a dry climate making them likely to undergo settlement during a seismic event.

3.5.4 Geologic Hazards

Erosion

Erosion can be initiated by wind or water. Silt-sized particles are most easily eroded due to their size and low cohesiveness. Soils residing within the assessment area are susceptible to wind erosion, especially during the spring and fall months when wind speeds increase. Sporadic,

torrential rains can cause major flash flood events that create significant erosion in the region. The project area contains soils with a moderate potential for erosion (NRCS, 1969).

The applicant has obtained a National Pollution Discharge Elimination System (NPDES) permit in accordance with the State Water Quality Control Board and has identified and developed a Storm Water Pollution Prevention Plan (SWPPP) incorporating Best Management Practices (BMPs). During construction, the applicant shall comply with erosion and sediment control measures in accordance with NPDES requirements and the SWPPP.

Expansive Soils

Expansive soils possess a shrink-swell characteristic that can result in structural damage over a long period of time. Expansive soils are largely comprised of silicate clays, which expand in volume when water is absorbed and shrink when dried. Highly expansive soils can cause damage to foundations and roads. In general, the soils within the assessment area have a moderate potential for expansion due to their granular, silty and sandy characteristics (Leighton, 2007).

Non-Earthquake Induced Settlement

Settlement can occur from immediate settlement, consolidation, shrinkage of expansive soil, and liquefaction (discussed above). Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load.

Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. The soils in the project areas are porous and reside in a dry climate making them likely to undergo some settlement. As such, they are not suitable for the support of structures and/or engineered fill. Therefore, some level of non-earthquake induced settlement is likely to occur. However, the bedrock is suitable for the support of structures and engineered fill.

3.5.5 Regulatory Framework

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides, and its purpose is to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. This requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Seismic Hazard maps have been completed for much of the Southern California region.

The project site is located within a Seismic Hazard Zone for liquefaction, as designated by the California Geological Survey. Therefore, evaluation and mitigation of potential liquefaction hazards must be conducted in accordance with the California Geological Survey, Special Publication 117, adopted March 13, 1997 by the State Mining and Geology Board pursuant to the Seismic Hazards Mapping Act, as discussed in the *Impacts and Mitigations* Section below.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code. The 2007 CBC is based on the 2006 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault).

Los Angeles County Code

Title 26 of the Los Angeles County Code is the building standards code for the county. Given that the project lies in the unincorporated area of Los Angeles County, this code serves as the relevant municipal code for the project site. Title 26 of the code contains approximately 100 chapters many of which are dedicated to regulations outlining proper standards for project subject to seismic hazards. The relevant chapters include, but are not limited to: Chapter 16 – Structural Design; Chapter 16.52 - General Regulations; Chapter 19 – Concrete; Chapter 23 – Wood; and Chapter 70 – Grading.

Los Angeles County General Plan

According to the Los Angeles County General Plan (1980), there are general standards that will apply to all developments in seismic zone. When a major fault is identified and mapped in accordance with the Alquist- Priolo Act, new developments must comply with criteria established by the State Mining and Geology Board. The Board requires a registered geologist to prepare a geology report and submit it to the appropriate local agency for review. Additionally no structure for human occupancy can be constructed within 50 ft of a major fault zone⁹. In addition to the provisions of the County building codes, applications for zoning or tentative subdivision approval shall be submitted to the county engineer who will determine the need for additional geologic data and establish conditions for development as appropriate.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan is a component of the Los Angeles County General Plan and its policies are used to guide most land use and planning decisions in the Antelope Valley area. The general Seismic Safety Policies call for the establishment and enforcement of standards to reduce unacceptable levels of seismic risk. It also requires all new developments and appropriate existing developments to comply with established seismic safety standards. Additionally, the plan advocates programs, research and evaluations that will better inform the earthquake safety measures for Antelope Valley. Similar to the Los Angeles County General Plan, construction along the trace of a major fault is prohibited. Minimal development in the “Seismic Safety Management Areas”¹⁰ is allowed including light recreation, agriculture, neighborhood commercial and very low density residential.¹¹

3.5.6 Impacts and Mitigation

Significance Criteria

The criteria used to determine the significance of an impact are based on Appendix G of the *CEQA Guidelines*. For this analysis, implementation of the proposed project may result in significant impacts if it would:

1. Expose people or structures to potential substantial adverse effects, including risk of loss, injury or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.
 - Strong seismic ground shaking.
 - Seismic-related ground failure, including liquefaction.
 - Landslides;

⁹ Specific exceptions include individually constructed, wood frame, single family residences and mobile homes.

¹⁰ Seismic Safety Management Areas are areas within the Alquist-Priolo Seismic Special Studies Zone and other identified fault zones.

¹¹ Very low density residential is a maximum of 0.5 dwelling units per acre.

2. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
3. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code creating substantial risks to life or property;
4. Result in substantial soil erosion or the loss of topsoil; or
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Project Impacts

Impact 3.5.1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, due to strong seismic ground shaking (less than significant with mitigation).

The project site does not include any active or potentially active faults that intersect the boundaries of the project site. Nevertheless, there are five active faults within 50 miles of the site (Table 3.5-1 above) and the Southern California region as a whole is considered a region of high seismic activity. Five miles southwest of the project site is the Llano fault, which is a splay of the San Andreas. A significant seismic event on any of these regional active faults could potentially cause damage at the project site. The unconsolidated nature of the underlying soils in portions of the project area could intensify ground shaking further contributing to any movement at the site (ESA, 2006). Ground shaking from a significant event on one of the major faults would likely cause some degree of damage to project facilities.

The proposed project improvements would fully comply with the requirements of the California Building Code (CBC) Seismic Criteria. Well-designed structures in conformance with the CBC seismic building code requirements would not be anticipated to experience serious damage or collapse because the criteria have been developed to prevent any such damage. These building codes provide requirements for construction, grading, excavation, use of fill, and foundation work, including type of materials, design, procedures, etc., which are intended to limit the probability of occurrence and the severity of consequences from geologic hazards. Necessary building permits, plan checks, and inspections would also be required by the County Building Department. Therefore, with implementation of the Mitigation Measure **GEO-1** below, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and a less than significant impact is anticipated.

Mitigation Measures:

GEO-1: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. Site specific geotechnical

investigations and or recommendations shall be prepared for the approved gymnasium and other associated facilities. Prior to final building approvals, geotechnical engineering recommendations regarding mitigation and reduction of seismic hazards for the site shall be reviewed for compliance with the *Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007*.¹² The purpose of these guidelines is to protect the public safety from seismic effects.

Significance after Mitigation: Less than significant.

Impact 3.5.2: The proposed project would not be located on a geologic unit that would become unstable, and potentially subside or be damaged by ground failure due to liquefaction (less than significant with mitigation).

Liquefaction is a phenomenon in which soil, in the presence of high groundwater, loses its shear strength for short periods of time during an earthquake. During sufficient ground shaking there is a loss of grain-to-grain contact due to a rapid increase in pore water pressure, causing the soil to behave as a fluid for short periods of time. The effects of liquefaction could include excessive differential settlement for the structure supported on the liquefying soils. The amount of settlement is dependent, in part, on the thickness of the liquefiable layer.

According to the Geotechnical report conducted by Leighton Consulting at least a portion of the project site is located within the liquefaction zone identified in the CGS Seismic Hazards Zone (Leighton, 2007). The report monitored ground water levels quarterly during the 2006 calendar year and found that groundwater levels varied between 4.5 feet in depth to 16.6 feet in some areas of the project site. Additionally, historic groundwater levels are between 10 and 20 feet. These groundwater levels in conjunction with the unconsolidated, silty, sandy soils create the potential for liquefaction at the project site (Leighton, 2007). Consequently, without mitigation the proposed project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death. However, there are parts of the project that lay outside of the liquefaction zone and would not be immediately subject to the impacts discussed above.

Mitigation Measures:

GEO-2: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. The project applicant shall prepare a site specific, design level geotechnical investigation for the approved project to determine the particular project designs and provide site specific engineering recommendations for mitigation of liquefiable soils. Liquefiable soils under the conditions described in the geotechnical report shall be mitigated according to the requirements of the Seismic Hazards Mapping Act. Prior to incorporation into the project, geotechnical engineering recommendations regarding the mitigation and reduction of liquefaction for the site shall be reviewed for compliance with the *Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park*.

¹² Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

May 22, 2007.¹³ The purpose of these guidelines is to protect the public safety from seismic effects such as liquefaction.

Significance after Mitigation: Less than significant.

Impact 3.5.3: The proposed project would not be located on expansive soils, potentially damaging foundations and thereby creating substantial risks to life or property (less than significant with mitigation).

The shrink-swell potential of expansion in soils is a reflection of the ability of some soils with high clay content to experience a significant change in volume with a change in moisture content. This characteristic poses a significant hazard to sites that undergo seasonal variation in soil moisture content, such as hillsides or flatlands with a seasonally fluctuating water table. According to the geotechnical investigation conducted at the project site, the soil types present have a moderate expansion potential (Leighton, 2007). A majority of the soils contain calcareous materials in the sub-surface horizons, which enhances water retention in the soils and potentially increases shrink-swell potential. However, standard geotechnical practices that follow building code requirements¹⁴ can typically minimize the potential damage from expansive soils. Implementation of the mitigation measure below would reduce the potential impact from expansive soils to less than significant levels.

Mitigation Measures:

GEO-3: The earthwork and site preparation of the project site, prior to placement of project improvements including foundations, shall include the mitigation of expansive soils in accordance with Section 1805.8 of the 2007 California Building Code (or equivalent within a superseding version if applicable). The recommendations for mitigation of expansive soils shall be made by a California licensed geotechnical engineer or engineering geologist and the approved project will comply with said report.

Significance after Mitigation: Less than significant.

Impact 3.5.4: The proposed project construction activities would not result in substantial soil erosion or the loss of topsoil (less than significant).

The proposed project would involve significant earthwork and grading activities that would disturb site soils and potentially expose them to wind or water erosion. According to the Soil Survey the site soils have a moderate potential for erosion (NRCS, 1969). The potential for soil erosion on the proposed project site is generally lower than adjacent areas due to its generally level topography; however the disturbance from construction activities could result in temporary

¹³ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

¹⁴ Section 1805.8 of the California Building Code outlines the constraints for building on expansive soils

wind- and water-driven erosion of soils. However, the project site would disturb more than one acre and therefore would be required to obtain a General Construction permit under the State Water Quality Control Board National Pollution Discharge Elimination System (NPDES) program. The General Construction permit requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which includes measures to prevent or minimize the potential for erosion or loss of topsoil at the construction site. Implementation of the mitigation measure below would ensure that the potential for erosion or loss of topsoil would be reduced to less than significant levels.

Mitigation Measures: None required.

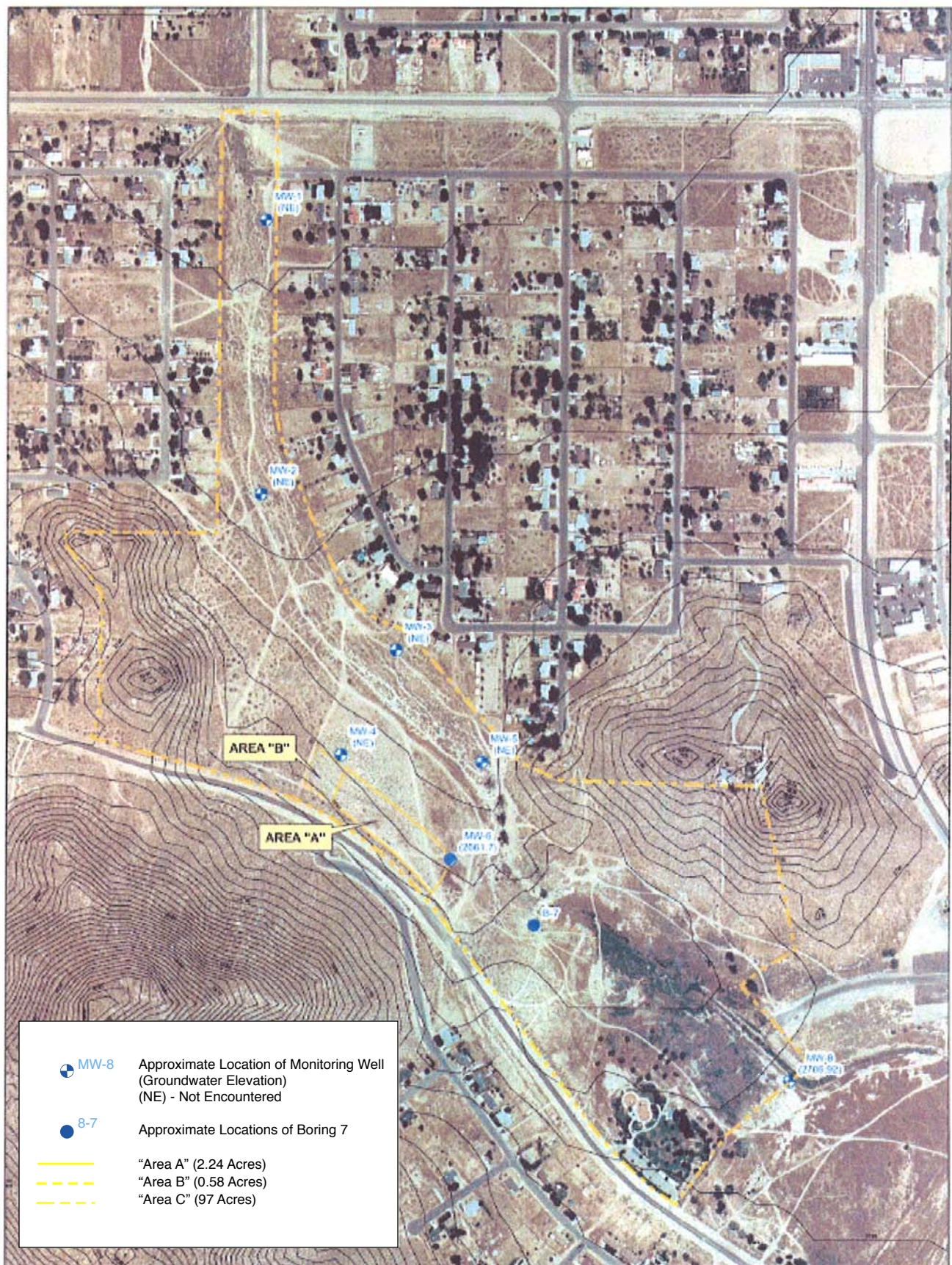
Impact 3.5.5: The proposed project site would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems (less than significant).

The proposed project would require the use of a septic system as the community of Lake Los Angeles is entirely on septic or localized treatment systems. Leighton Associates has conducted a feasibility study for the location and has tested for percolation rates (Leighton, 2005). Based on the results of this testing, Leighton concluded that a 2.24-acre area slightly to the northwest of the project site would be suitable for a leach field, based upon the Los Angeles County Department of Health Services private sewage construction specifications.

County specifications require a separation of at least 10 feet between the bottom of proposed leach lines and the top of the groundwater surface, bedrock, and/or other impervious material (County of Los Angeles, *Procedures for Application for Approval of Private Sewage Disposal System Construction*.2000). Leighton drilled eight boreholes to depths of thirty feet and found ground water in only two at depths of seven and sixteen feet. Subsequently two areas with sufficient elevation above the static water level were identified and percolation testing was conducted. One of these areas¹⁵ drained six inches of water in times ranging from four to 50 minutes, making it suitable for on-site septic disposal (**Figure 3-4**). No other areas had suitable groundwater depth or percolation rates (Leighton 2005).

The proposed suitable area exhibits a minimum percolation rate of approximately one inch per 50 minutes (Leighton, 2005). Based on this percolation rate and regulations proposed by the State Water Resource Control Board (SWRCB), the suitable area could provide a maximum disposal capacity of approximately 30,000 gallons per day.¹⁴ As a comparison, based on available generation rates from the City of Los Angeles, a gymnasium/ community building would generate approximately 0.30 gallons of wastewater per day per square foot (City of Los Angeles generation rates, 2001). The County has estimated the maximum proposed gymnasium/ community building size at approximately 14,500 square feet. Therefore, a maximum sized gymnasium would generate approximately 4,350 gallons of wastewater per day, which is well below the maximum disposal capacity of 30,000 gallons per day for the suitable area.

¹⁵ Area A in Figure 3-4 was identified as the singular viable area for an on-site septic system.



SOURCE: Leighton Consulting, Inc., 2008.

Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237.01

Figure 3-4
Monitoring Well
Location Map

Leighton more conservatively estimated that the suitable area could accommodate a minimum of five 3,500-gallon septic tanks or 17,500 gallons per day. Again, the approximately 4,350 gallons of anticipated wastewater per day for the proposed gymnasium/ community building is well below the maximum disposal capacity of 17,500 gallons per day for the suitable area. The county has approved the design for the septic system and Leighton has concluded the feasibility study for the system. The project will be required to apply for and final obtain approval for the proposed septic system design from the Los Angeles County, Department of Health Services, Environmental Health Division and as a result will have a less than significant impact.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.5.6: The proposed project would not result in adverse cumulatively considerable geology, soils, and seismicity impact (less than significant).

The entire region is located within a seismically active region containing a wide range of geologic and soil conditions which relate to varying degrees of hazards. These conditions can vary widely within a short distance, making the cumulative context for potential impacts more localized and even site-specific. Development of the project, with implementation of the identified mitigation measures above, would have less than significant impacts related to exposing persons or structures to geologic, soils, or seismic hazards. Future projects may also result in development in an area subjected to seismic risks and hazards, and would be subject to individual project mitigation measures, where deemed appropriate by the applicable lead agency. All construction phases of this and future projects would be required to implement appropriate mitigation measures and adhere to all federal, state and local programs, requirements and policies pertaining to building safety and construction permitting. The project and all potential future projects would be required to adhere to the County's Building Code and Grading Ordinance in Title 26 of the Los Angeles County Code. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area¹⁶. Based on the list provided, there are no related projects within a five-mile radius of the proposed project. The proposed project would not have a cumulatively considerable contribution to a larger impact. Further, the proposed project in combination with potential future development in the area would not result in a cumulatively significant impact by exposing people or structures to risk related to geologic hazards, soils and/or seismic conditions.

Mitigation Measures: None required.

¹⁶ Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.6 Hazards and Hazardous Materials

3.6.1 Introduction

This section presents an evaluation of the potential for hazards and hazardous materials impacts related to the proposed project. Existing conditions in the project area; potential hazardous materials issues associated with site construction; and the potential for the project to transport hazardous materials and/or hazardous wastes are discussed. Hazards associated with airport and wildland fires are also discussed. This section identifies potential project impacts and appropriate mitigation measures where necessary and describes the regulatory process for the project site and surrounding area. As used in the EIR, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. Hazardous materials are defined in California Health and Safety Code Section 25501:

A hazardous material is any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous wastes are defined in Section 25117:

Hazardous wastes are wastes that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

A material or waste may be classified as hazardous if it has any of the following properties: flammable, combustible, explosive, corrosive, strongly oxidizing, strongly acidic or basic (extreme pH value), toxic and radioactive. Due to these qualities, hazardous materials and wastes require careful handling in order to avoid potential damage or injury. Hazardous wastes are substances of no further intended use which need treatment or disposal, or both, while hazardous materials include new and usable substances (such as fertilizers or pesticides).

The general public and workers are potentially at risk wherever hazardous materials are used, transported or disposed of based on the potential for accidental upset or other exposure due to improper handling. Historical uses and handling of hazardous materials can also represent a hazard largely due to less stringent regulatory controls in the past. Ecological communities may also be at risk, depending on the type of populations and locations relative to potential exposure sources. Inherent in this section are the concepts of “hazard” of materials and the “risk” they pose to human health and the ecological environment.

A hazard is any situation that has the potential to cause damage to human health or the environment. The risk to human health and the ecological environment is determined by the probability of exposure to hazardous materials and the severity of harm such exposure would pose.

The presence of hazardous materials and other safety hazards has the potential to affect residents, workers, and visitors within and adjacent to the project area. Certain activities can pose a risk of exposure to the public or the environment due to routine or accidental releases, such as spills. Transportation of hazardous materials and wastes along major transportation routes on or near the project area could also present a risk of exposure.

This section describes the potential adverse impacts on human health and the environment from hazards that could result from the project use or transportation of hazardous materials (i.e. during construction and from project operation). An overview of the regulatory framework related to hazardous materials is followed by an analysis of potential impacts and the mitigation measures, if applicable, necessary to reduce them to less than significant levels.

3.6.2 Environmental Setting

The proposed project would be located on an undeveloped 3-acres piece of the greater Stephen Sorensen County Park. The proposed project would be located next to 15-acres of improved park land. The park is located with the Antelope Valley within the unincorporated community of Lake Los Angeles.

Hazardous Materials

An Environmental Data Resources (EDR) Radius Map search was performed for Stephen Sorensen County Park and a 2-mile buffer around that address (EDR, November 7, 2005). This address location is roughly in the middle of the site and the buffer completely encompasses the entire site. This report is on file with the lead agency. More than 51 different federal, state, and local environmental databases were searched, including Brownfield sites, leaking underground storage tank (LUST) sites, historical cleanup sites, etc. The EDR search identified no portion of the park site in any of the hazardous waste site databases searched. Within a 2-mile radius of the park, six sites were identified by the inquiry. These sites are detailed in **Table 3.6-1**.

Wildland Fires

The project site is located in the Antelope Valley which is a desert region of the county and supports drought tolerant vegetation. Areas around the 3-acre project site are vegetated with creosote brush scrub and Joshua tree woodlands which are susceptible to wildland fires. The California Department of Forestry and Fire Protection published a Fire Hazard Severity Zone map for Los Angeles County in 2007¹. The map identifies fire hazard areas and classifies the areas in three categories: 1) moderate, 2) high, and 3) very high. The project site has not been classified as a fire hazard area on this map.

¹ Accessed online on June 26, 2008: http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_losangeles.php

**TABLE 3.6-1
SUMMARY OF THE EDR SEARCH WITHIN 2 MILES OF STEPHEN SORENSEN COUNTY PARK**

Site Name	Site Address	Direction	Database Listing	Environmental Issues
1/4 □ 1/2 Mile				
Dwight Ones DDS	40112 170 th Street East, Suite C	ENE	HAZNET	HAZNET: 0.0208 tons of unspecified organic liquid mixture and 0.0001 of other inorganic solid waste.
Kay D. Curtis	40112 170 th Street East, Suite C	ENE	LOS ANGELES CO. HMS	LOS ANGELES CO. HMS: Permit and Facility Status as Removed.
Lake Los Angeles Auto Valve Service Center	40134 170 th Street East, Unit D	NE	HAZNET	HAZNET: 0.5837, 0.2293, and 0.1200 tons of waste oil and mixed oil; 0.9000 and 0.4587 tons of unspecified aqueous solution.
Lake LA Dairy	40245 170 th Street East	NE	UST	UST: One (1) UST.
1/2 □ 1 Mile				
Lake Los Angeles Market	40340 170 th Street East	NNE	HIST UST	HIST UST: Three (3) USTs storing Not Reported, Unleaded, and Premium.
Lake LA Recycling/Saddleback Apple Market	17051 East Avenue O	NNE	UST; SWRCY	UST: One (1) UST; SWRCY: Date of certification is 8/1/97.

Key:

HAZNET □ Data extracted from the copies of hazardous waste manifests received each year by the DTSC

HIST UST □ Historical underground storage tanks.

LOS ANGELES CO. HMS □ Los Angeles County industrial waste and underground storage tank sites.

SWRCY □ Listing of recycle facilities in California.

UST □ Underground storage tank database containing registered USTs

SOURCE: EDR, November 7, 2005.

Airports

The Antelope Valley has long been a region used by the US Military for aviation activities and by commercial and private aircrafts. Edwards Air Force Base is still operable and it located about 20 miles north of the project site. The Palmdale Airport is located about 14 miles to the west of the proposed project site. Grey Butte Field Airport is located about 9 miles to the south east of the project site.

3.6.3 Regulatory Framework

Federal, state, and local regulations govern the range of hazardous materials issues that may be encountered during construction and ongoing operation in the proposed project area. Various state and local regulatory agencies implement the regulations to minimize the risk to human health and the environment from hazardous materials. Incidents of environmental contamination and human injury or death associated with hazardous materials have created a public awareness of the potential for adverse effects from careless handling and/or use of these substances. Consequently, a number of new federal, state and local laws have been enacted to regulate the management of hazardous materials and wastes. Implementation of these laws and the management of hazardous materials are regulated independently of the CEQA process at federal,

state, and local levels through programs administered by various agencies. The goals and policies of the County of Riverside are also described.

Federal

Primary federal agencies with responsibility for hazardous materials management include the Environmental Protection Agency (EPA), Department of Labor Occupational Health and Safety Administration (OSHA), Department of Transportation (DOT), and Nuclear Regulatory Commission (NRC). Major laws and issue areas include: Resources Conservation and Recovery Act (RCRA) - hazardous waste management; Hazardous and Solid Waste Act (HSWA) - hazardous waste management; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - cleanup of contamination; Superfund Amendments and Reauthorization Act (SARA) - cleanup of contamination; Atomic Energy Act - radioactive materials; and Emergency Planning and Community Right-to-Know (SARA Title 111) - business inventories and emergency response planning. Specific requirements for implementation of these statutes are codified in Title 40 of the Code of Federal Regulations (CFR). Additional regulations that apply to workplace safety and transportation of hazardous materials are contained in CFR Titles 29 and 49, respectively. Regulations that pertain to radioactive materials are included in CFR Title 10. Hazardous materials management laws in California include: Hazardous Waste Control Law (HWCL) - hazardous waste management; Safe Drinking Water and Toxic Enforcement Act - discharges to water and public notification; Hazardous Substances Account Act - cleanup of contamination; Hazardous Material Management Act - "Business Plan" reporting and California Radiation Control Law - radioactive materials.

State

Inventory Statement

If stored quantities would exceed threshold amounts, the Hazardous Material Service Division would require and review a Business Plan for the proposed project. Specific requirements for implementation are codified primarily in Title 26 of the California Code of Regulations (CCR) and Chapter 6.95 of the California Health and Safety Code. Additional regulations that apply to workplace safety are contained in CCR Title 8. Primary State agencies with jurisdiction over hazardous materials management are the Department of Toxic Substances Control (DTSC), Department of Health Services Radiological Health Branch (DHS RHB), and the Regional Water Quality Control Board (RWQCB). Other State agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (OES), California Department of Fish and Game (CDFG), Air Resources Board (ARB), Department of Transportation (Caltrans), and Integrated Waste Management Board (IWMB).

The DTSC has the primary enforcement authority for RCRA within California and for the State HWCL. The local enforcement of these two laws is generally provided by county governments through a Memorandum of Understanding (MOU) with the DTSC.

Databases Relating to Hazardous Waste²

The California Environmental Protection Agency (CalEPA) compiles, maintains, and updates specified lists of hazardous material release sites in accordance with Government Code Section 65962.5. CEQA Section 21092.6 requires each lead agency to consult the lists to determine whether the project and any alternatives are identified on any of the lists which include the following lists or databases:

- USEPA National Priorities List (NPL). This list includes all the sites under USEPA's Superfund program, which was established to fund clean-up of contaminated sites that pose risk to human health and the environment.
- USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). This list contains 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned (NFRAP) status.
- USEPA Resource Conservation and Recovery Act Information System (RCRIS or RCRAInfo). This database provides a national inventory of hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.
- DTSC Cortese List. The Department of Toxic Substance Control (DTSC) maintains the Hazardous Waste and Substances Sites (Cortese) List for use by state and local agencies to provide information about hazardous release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database (CalSites).
- DTSC HazNet. DTSC uses this database to track hazardous waste shipments.
- State Water Resources Control Board Leaking Underground Storage Tank Information System (SWRCB LUSTIS). The SWRCB maintains an inventory of underground storage tanks (USTs) and leaking underground storage tanks (LUSTs). This database also tracks unauthorized releases.

Worker Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the work place. The California Division of Occupational Safety and Health (Cal OSHA) and the federal Occupational Safety and Health Administration are the agencies responsible for assuring worker safety in the workplace.

Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. At sites known or suspected to be contaminated, a Site Safety Plan must be prepared. The Site Safety Plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at a contaminated site.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government, and private agencies. Responding to hazardous materials

² CEQA, Public Resources Code (PRC) §21092.6, 2005.

incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies, including Cal EPA, CHP, the California Department of Fish and Game, the RWQCB, and the local fire department.

Local

County of Los Angeles General Plan

The Los Angeles County General Plan (1993) is a land use guidance document that includes goals and policies regarding hazards and hazardous material within the County, along with other environmental resources.

The General Plan includes the following General Policy:

- Policy: 14 Direct urban development and revitalization efforts to protect natural and man-made amenities and to avoid severe hazard areas, such as flood prone zones, active fault zones, steep hillsides, landslide areas, and fire hazard areas.

The General Plan Circulation Element includes the following policy that relates to hazardous materials:

- Policy 28: Provide for the safe movement of hazardous materials.

The General Plan Conservation, Open Space and Recreation Element includes the following policy regarding hazards:

- Policy 29: Discourage isolated development in wildland fire hazard areas and develop stricter brush clearance ordinances to protect existing structures.

The General Plan Safety Element includes the following discussion regarding hazardous materials and includes the following goal and selected policies:

Los Angeles County is especially vulnerable to unauthorized releases of hazardous materials. The County is one of the nation's largest industrial centers and a major producer of a wide variety of toxic, flammable, and explosive materials.

- Goal: Reduce threats to the public health and safety from hazardous materials, especially threats induced by earthquakes.
- Policy 20: Review proposed development projects involving the use or storage of hazardous materials, and disapprove proposals which cannot properly mitigate unacceptable threats to public health and safety to the satisfaction of responsible agencies.
- Policy 23: Promote efforts to reduce or eliminate the use of hazardous materials through dissemination of information about and creation of incentives and disincentives for use of safer substitutes.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. The policies that are applicable to hazards pertain to geologic and fire hazards; please see Section 3.5 Geology and Soils and Section 3.10 Public Services for details.

3.6.4 Impacts and Mitigation

Methodology

This impact analysis focused on potential effects of hazardous materials, hazardous waste, airport hazards, and wildland fire hazards. Potential impacts to the project and from project implementation were analyzed while considering the *CEQA Guidelines* thresholds.

Significance Criteria

The significance criteria for this analysis were developed from criteria presented in Appendix G of the *CEQA Guidelines*. For this analysis, the proposed project would result in significant impacts if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous material;
- Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Project Impacts

Impact 3.6.1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (less than significant).

As the proposed project is a Gymnasium/ Community Building with associated lighting, landscaping, walkways and parking areas, it would not transport, use, or dispose of any hazardous materials beyond those used for construction and maintenance during occupancy. Construction activities may involve limited transport, storage, use, or disposal of hazardous materials. Some examples of hazardous materials handled during construction include fueling and servicing construction equipment on-site and the use of paints and solvents during construction. These activities would be short-term and one time events and would be subject to federal, state, and local health and safety requirements. A less than significant impact related to the use or transport of hazardous materials is expected to occur during construction.

Long-term operation of the proposed project would involve very little transport, storage, use, or disposal of hazardous material. Typical facility maintenance involves the limited use of hazardous materials through custodial, routine maintenance, and repair activities, including commercial cleansers, lubricants, and paints. These items would be stored in an appropriate place, such as a utility closet, with limited access only by appropriate employees of the park. As such, impacts related to this issue are expected to be less than significant impacts during the operation of the proposed project. Therefore, the proposed project would create a less than significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Mitigation Measures: None required.

Impact 3.6.2: The proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment (less than significant).

As described above, construction and operation activities would require the use of small amounts of hazardous materials and would be required to comply with federal, state, and local laws and regulations regarding proper storage, application, and disposal. The proposed Gymnasium/ Community Building and associated facilities would not create a significant hazard to the public or environment through reasonable foreseeable upset and accidental release of hazardous materials. Impacts would be less than significant.

Mitigation Measures: None required.

Impact 3.6.3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (no impact).

The proposed project is not located within 0.25 mile of an existing or proposed school (Thomas Brother's Guide, page 4199, 2009). Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There would be no impact.

Mitigation Measures: None required.

Impact 3.6.4: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (no impact).

As indicated in Table 3.6-1 above, the proposed project site is not listed on any hazardous waste site databases searched by EDR as a potential or confirmed hazardous substance release site. However, there are hazardous waste sites between a quarter and half mile of the site. These facilities are an auto shop, a dentist office, a dairy, and a market with recycling capability. These land uses do not have reported spill or contamination levels that have migrated to the project site, causing hazardous material contamination. Therefore, the proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the project would not create a significant hazard to the public or the environment and there would be no impact.

Mitigation Measures: None required.

Impact 3.6.5: The proposed project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area (no impact).

As stated above, there are airports and or airstrips in the Antelope Valley. However, the proposed project is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area. There would be no impact.

Mitigation Measures: None required.

Impact 3.6.6: The proposed project would not be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area (no impact).

The proposed project is not located within the vicinity of a private airstrip, as none exist in the area. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area within two miles of a private airstrip and there would be no impact.

Mitigation Measures: None required.

Impact 3.6.7: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (no impact).

The proposed project site's vehicular access is limited to Avenue P, which connects to 170th Street East. To the north of the site, there are single-family homes and access is not available to the site from Avenue O. To the south, access is limited to the use of Avenue P. To the west, Avenue P provides only local access and dead-ends prior to reaching Avenue O. Therefore, the proposed project site is not likely found adjacent to a designated emergency response corridor used by emergency response vehicles. North of the site, on North 170th Street East, is the Los Angeles County Fire Department, Fire Station #114, which will service the project site. Additionally, prior to operations of the proposed Gymnasium/ Community Building an Emergency Response Plan would need to be developed per the requirements of 29 CFR 1910.120(q)(1). Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and there would be no impact.

Mitigation Measures: None required.

Impact 3.6.8: The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (less than significant).

There are areas adjacent to the project site that contain native habitat, such as creosote brush scrub and Joshua tree woodland that would be considered wildlands. These areas could be susceptible to wildland fires. However, the proposed Gymnasium/ Community Building would incorporate several fire-safe features. The building would be built with fire resistant materials, the project would comply with the requirements of the Los Angeles County Fire Code, and the project would be landscaped and hardscaped using fire retardant plants and materials to create a 30-foot safety zone around the gymnasium, as recommended by the Federal Emergency Management Agency (FEMA).³ Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands and there would be a less than significant impact.

Mitigation Measures: None required.

³ FEMA web site, accessed at http://www.fema.gov/hazard/wildfire/wf_prepare.shtm.

Cumulative Impacts

Impact 3.6.9: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials on a cumulative level (less than significant).

As discussed above, the proposed project would use small quantities of hazardous material during construction and operation activities. Hazardous material usage of this nature typically occurs in a local or site-specific context versus a cumulative context combined with other development projects. The Los Angeles Department of Regional Planning, Impact Analysis Section was contacted to obtain a list of related projects in the area.⁴ Based on the list provided, there are no related projects within a five-mile radius of the proposed project. The development of the proposed project would have a less than significant project-level hazardous material impact to the public and the environment within the vicinity of the project area. Other potential future developments within the area may increase the potential to disturb existing contamination and/or the potential for handling and usage of hazardous materials, which could result in significant related project impacts. Such projects would be required to comply with the same regulations as the proposed project. This includes federal, state and local regulatory requirements for the safe transport (Cal EPA and Caltrans) of hazardous materials or cargo, and for the safe disposal of hazardous materials (Cal EPA, DTSC, LACPHD). Where appropriate for future projects handling large amounts of hazardous materials, future-project mitigation measures would be required through the CEQA process. Therefore, the effect of the project on hazardous materials would not be cumulatively considerable.

Similarly, the proposed project would have a less than significant project-level impact with regard to the remaining hazards issues of airport hazards and wildland fire potential. The proposed project's impact would not be significant, and would not contribute to significant cumulative impacts with regard to these issues. Where appropriate for future projects proximate to airports or wildfire hazard areas, future-project mitigation measures would be required through the CEQA process. The cumulative effect would not be cumulatively considerable with regard to either airport hazards or wildland fire potential.

Mitigation Measures: None required.

⁴ Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.7. Hydrology and Water Quality

3.7.1 Introduction

This section addresses changes in hydrology, water quality and groundwater conditions that could result from the development of the proposed project. This section describes the existing hydrologic setting, the framework that regulates the surface water, flooding and water quality, and presents potential project impacts and, when necessary, provides appropriate mitigation.

3.7.2 Environmental Setting

Climate and Topography

The climate is generally dry, experiencing an annual average precipitation of less than 10 inches on the valley floor and greater than 12 inches in the local mountains. Over 80 percent of the mean annual precipitation occurs during the winter months. During the summer months, a relatively minor amount of rainfall occurs with infrequent and localized thunderstorms.

The site is part of the Antelope Valley which is generally flat with a very slight gradient towards the north. The generally flat topography is interrupted by resistant buttes that rise above the valley floor. The site encompasses a relatively narrow passage between several buttes which are known as the Lovejoy Buttes. The peaks of these buttes in the site rise up to around 2,800 feet above mean sea level (amsl) while the floor elevations range from 2,640 to 2,700 feet amsl.

The butte in the western portion of the site has two peaks that rise to elevations above 2,775 and 2,825 feet amsl and possess slopes of 50 to 100 percent in the uppermost elevations of the butte. From these peaks, the slope percentage quickly becomes 0 to 2.5 percent heading towards the interior of the site. The wash to the east is at elevations between 2,650 to 2,675 feet amsl. The butte in the northeastern portion of the site has one peak that rises above 2,825 feet amsl and also possesses slopes of 50 to 100 percent in the uppermost elevations of the butte.

To the southwest of the southwestern most portion of the butte to the northeast, Lovejoy Springs can be found. Lovejoy Springs is a dry spring that possesses granite cliffs that rise 15-20 feet above the wash on either side and these cliffs possess slopes of 50 to 100 percent.

Surface Water Hydrology

Regional Drainage

The western Mojave Desert is a closed basin which is a playa system consisting of three primary lakebeds—Rosamond, Rogers, and Buckhorn—surrounded by a number of smaller playas. The three larger playas lie within Edwards Air Force Base. Rogers Lake is the largest, covering approximately 46 square miles. Rosamond Lake covers approximately 21 square miles and Buckhorn approximately 2.5 square miles. Today these lakebeds are usually dry, only occasionally covered in water following large winter storms.

The site lies east of Big Rock Creek, one of the major drainages flowing from the San Gabriel Mountains to the playas. Other water sources in the project area include Little Rock Creek, which parallels Big Rock Creek to the west and also drains the San Gabriel Mountains. Additionally, numerous springs occur in the region. The closest one, and on the site, is the now dry Lovejoy Springs, which watered a small valley nestled within Lovejoy Buttes.

Because the Antelope Valley is a closed basin with no outlet to the ocean, all water that enters the valley either evaporates, infiltrates into the groundwater basin, or flows toward the three playa lakes located near the center of the valley (Rosamond, Rogers, and Buckhorn Dry Lakes). Due to the relatively impervious nature of the playa lake soil, water that collects on the playa lakes eventually evaporates rather than infiltrating into the groundwater.

A number of creeks and washes carry surface water to the playa lakes. As a result of the arid climate, these creeks and washes typically flow only during periods of heavy rainfall or as a result of melting snowpack from the local mountains. Many areas in the Antelope Valley experience sheet flow during particularly heavy rainstorms, but tend to remain dry with moderate and low-intensity storms.

The applicant has prepared a SWPPP with BMPs to be implemented to capture, divert and or filter runoff from the proposed project site during construction. Recommended BMPs for the construction phase include proper stockpiling and disposal of demolition debris, concrete, and soil; protecting existing storm drain inlets; stabilizing disturbed areas; erosion controls; proper management of construction materials; waste management; aggressive litter control; and sediment controls.

The project shall include a catch basin system that will incorporate pollutant control devices to catch, filter, and absorb typical urban pollutants prior to discharging on-site. The project's Silver LEED status will also reduce the area of impervious surface, which is beneficial to groundwater recharge and water quality.

Local Drainage Patterns

Lake Los Angeles

Lake Los Angeles is a manmade lake located within the unincorporated community of Lake Los Angeles. The lake was fed by pumped groundwater but has been dry for several years because groundwater has not been actively pumped into the depression.

Stephen Sorensen County Park Site

There is one main southeast to northwest trending ephemeral wash that runs the length of the site from Lovejoy Spring toward the northern finger of the site where the water then flows offsite to the north through a culvert that passes underneath Avenue O. Between Lake Los Angeles (a dry, manmade lakebed, which is offsite and to the southeast) and Lovejoy Springs (onsite), a manmade channel allows the conveyance of water from the general area of Lake Los Angeles toward Lovejoy Springs (please see Figure 3-1 in Section 3.3 Biological Resources for a for

details). There was a small pool of surface water present at the time of a reconnaissance survey (November 4, 2005) within Lovejoy Springs. The area had received approximately one inch of rain the day before the site visit.

Lovejoy Springs

A network of ephemeral washes transverse the site, joining the main wash in the center of the property. The Lovejoy Butte U.S. Geological Survey (USGS) quadrangle map shows the wash as a blue-line stream that flows into Lovejoy Springs. During a survey, hydrophytic (i.e., water loving) vegetation was present within and adjacent to Lovejoy Springs (e.g., willows, tamarisk, giant reed, and cottonwoods). Additionally, the soil at Lovejoy Spring appears to be hydric (i.e., waterlogged). And, the soil may be inundated or saturated by surface water or groundwater periodically during the growing season of the prevalent vegetation, the average annual duration of inundation or soil saturation may preclude the occurrence of plant species typically adapted for life in aerobic (i.e., with oxygen) conditions. Therefore, the site appears to satisfy the USACE's definition of a "wetland" [U.S. Army Corps of Engineers (USACE), 1987].

Groundwater

Groundwater in the area was encountered at depths between approximately 7 to 16 feet below ground surface (bgs) but also found to be greater than 30 feet bgs in other areas (Leighton, 2005). Higher groundwater levels were typically found within the area of the wash onsite and lower groundwater levels were found moving away from the wash. Leighton consultants conducted groundwater monitoring of the area during the initial constraints analysis for the area of the proposed project site and beyond. One of the groundwater monitoring wells (MW-6) located on the southwest corner of the project site, has shown four quarters of relatively stable groundwater depth at 16 feet bgs (Leighton, 2007). However, another monitoring well (MW-4) located to the northwest of the project site, did not show any signs of groundwater in the 30 feet deep well (Leighton, 2007).

Flooding

Flood hazard areas are identified on Flood Insurance Rate Maps (FIRM) are identified as Special Flood Hazard Area (SFHA). SFHA are defined as the areas that will be inundated by a flood event having a one percent chance of being equaled or exceed in any given year. The one percent annual chance flood is also referred to as the base flood or 100-year flood.¹ SFHAs are labeled as Zone A, Zone AO, Zone AH among others. Moderate flood hazard areas are labeled Zone B or Zone X. According to the FIRM, Community-Panel Number 065043 0300 B (1980), the ephemeral wash and Lovejoy Springs are designated as Zone A. Zone A is defined by the Federal Emergency Management Agency as, "Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not

¹ The Federal Emergency Management Agency website, accessed at www.fema.gov/plan/prevent/floodplain/nfipkeywords/flood_zones.shtm on August 7, 2008.

performed for such areas; no depths or base flood elevations are shown within these zones”.² Development within Zone A must comply with FEMA requirements.³ A portion of Zone A is located within the Stephen Sorenson Park 100 acre property boundary, but outside of the proposed project’s 3.0 acre boundary. Please see **Figure 3-5, FEMA Map**, which displays the location of Zone A. Although the project site is outside the boundary of Zone A and does not require project specific mitigation; the project must comply with the County of Los Angeles’ Interim Peak Flow Criteria, the Antelope Valley Drainage Policy, and the Antelope Valley Comprehensive Plan of Flood Control and Water Conversation.

3.7.3 Regulatory Framework

Clean Water Act

The federal Clean Water Act, enacted by Congress in 1972 and amended several times since inception, is the primary federal law regulating water quality in the U.S. and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation’s rivers, streams, lakes, and coastal waters. The Clean Water Act prescribes the basic federal laws for regulating discharges of pollutants into waters of the U.S., which includes setting water quality standards for contaminants in surface waters, establishing wastewater and effluent discharge limits from various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the USEPA. At the state and regional levels, the act is administered and enforced by the State Water Resources Control Board (SWRCB) and the RWQCBs.

Porter-Cologne Water Quality Control Act

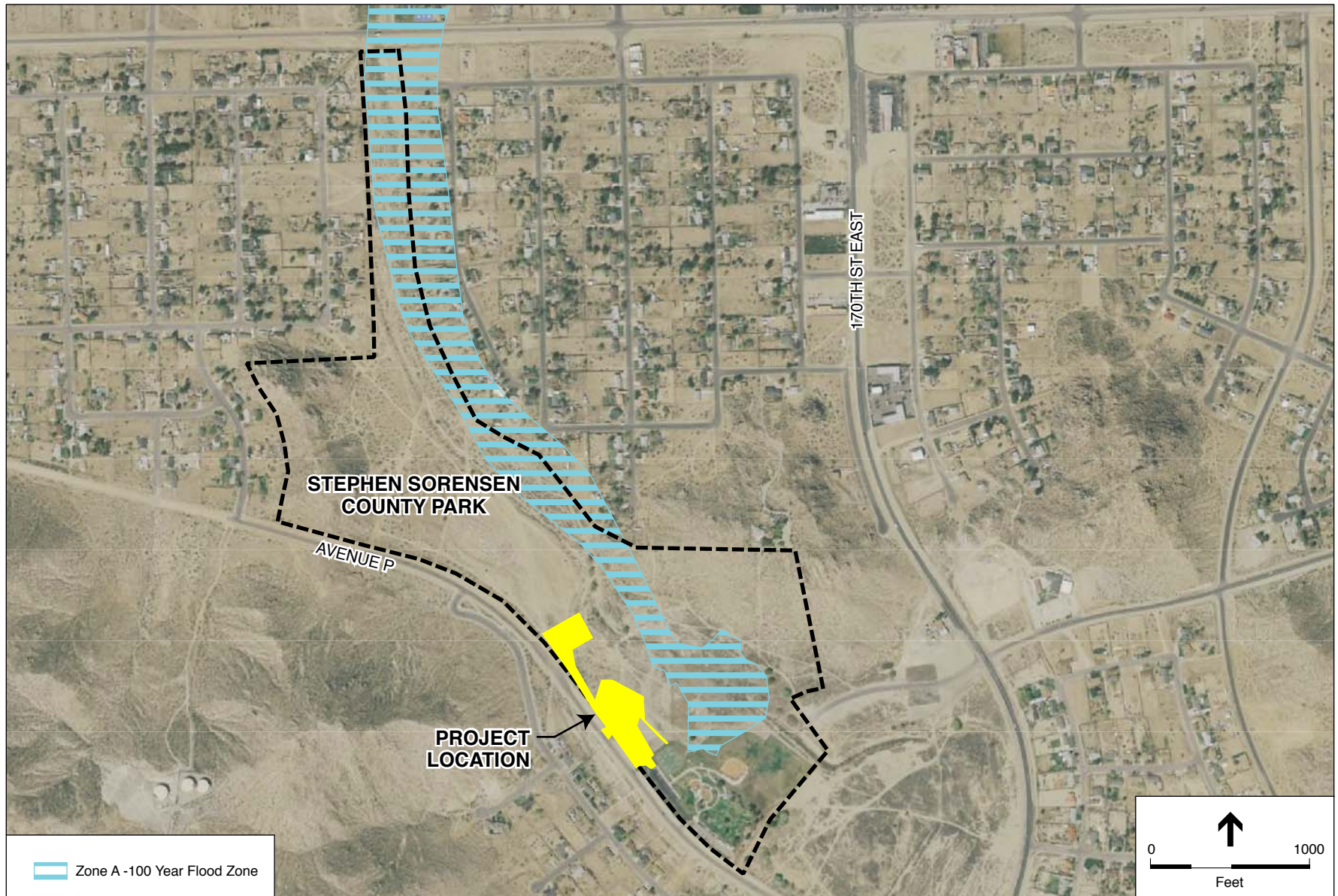
The Porter-Cologne Water Quality Control Act is the primary statute covering the quality of waters in California. The act sets out specific water quality provisions and discharge requirements regulating the discharge of waste within any region that could affect the quality of state waters. Under the act, the SWRCB has the ultimate authority over state water rights and water quality policy. The nine RWQCBs are responsible for the oversight of water quality on a day-to-day basis at the local/regional level. Within each region, the RWQCBs have prepared and periodically updated Basin Plans that identify existing and potential beneficial uses for specific water bodies. The project site is located within the jurisdiction of the Los Angeles RWQCB.

Water Quality Control Plans (Basin Plans)

Each RWQCB is required to develop, adopt, and implement a Water Quality Control Plan (Basin Plan) for its respective region. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in each

² The Federal Emergency Management Agency website.
<http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations>.

³ Based on comments from Mark Pestrella, of the Watershed Management division on July 22, 2008.



SOURCE: GlobeXplorer 01-02-2008; FEMA, 2008.

Stephen Sorensen County Park, Gymnasium/ Community Building Project . 205237.01

Figure 3-5
FEMA Map

region. Basin Plans identify beneficial uses of surface waters and groundwater within the corresponding region; specify water quality standards, known as water quality objectives, for both surface water and groundwater; and develop the actions necessary to maintain the standards to control nonpoint and point sources of pollutants to the state's waters. All discretionary projects requiring permits from the RWQCB (i.e., waste and pollutant discharge permits) must implement Basin Plan requirements (i.e., water quality standards), taking into consideration the beneficial uses to be protected.

NPDES Program

Since 1972, the Clean Water Act (CWA) has regulated the discharge of pollutants to waters of the U.S. from all point sources. Section 402(d) of the CWA establishes a framework for regulating nonpoint source (NPS) stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). Established in 1990, Phase I of the NPDES stormwater program regulates stormwater discharges from major industrial facilities, large and medium-sized municipal separate storm sewer systems (those serving more than 100,000 persons), and construction sites that disturb five or more acres of land. In 1999 the NPDES stormwater program was expanded to include Phase II. Pursuant to the Phase II NPDES Final Rule in December 1999, discharges of stormwater associated with construction activities that result in the disturbance of one acre of land or more must also apply for coverage under the statewide NPDES General Construction Activities Permit.

NPDES General Construction Permit

To comply with the NPDES General Construction Permit requirements, developers are required to submit a Notice of Intent (NOI) to the State Water Resource Control Board's (SWRCB) Division of Water Quality. The NOI includes general information on the types of construction activities that will occur at construction sites. Developers are required to submit a site-specific plan called the Storm Water Pollution Prevention Plan (SWPPP) to minimize the discharge of pollutants during construction. The SWPPP must include a description of the Best Management Practices (BMPs) that will be employed to reduce stormwater pollutants to the Maximum Extent Practicable (MEP⁴) for water quality protection. This includes implementation of BMPs aimed at sediment control, erosion control, and construction materials control (i.e. paint, solvents, concrete, petroleum products) to prevent stormwater pollutants from leaving construction sites, as well as a detailed description of (and schedule for) all monitoring. Construction activities that are subject to the project include, but are not limited to: clearing, grading, demolition, excavation, construction of new structures, and reconstruction of existing facilities involving removal and replacement that results in soil disturbance.

⁴ The MEP standard relies on BMPs that emphasize pollution prevention and source control, with additional structural controls as needed.

Los Angeles Standard Urban Stormwater Mitigation Plan

The Los Angeles Standard Urban Stormwater Mitigation Plan (SUSMP), approved by the Los Angeles RWQCB in 2000, was developed as part of the municipal stormwater program to address post-construction stormwater pollution from new development and redevelopment projects. The SUSMP defines water quality design standards to ensure that stormwater runoff is managed for water quality concerns, and to insure that pollutants carried by storm water are confined and not delivered to waterways. Depending on the types of pollutants that can be anticipated to occur in stormwater runoff from a site, project applicants are required to select appropriate source control and treatment control BMPs from the list included in the SUSMP. In combination, these treatment control BMPs must be sufficiently designed and constructed to treat or filter the first 0.75-inch of stormwater runoff from a storm event. As one of the permittees under the Los Angeles NPDES municipal stormwater permit, projects in Pasadena are subject to the SUSMP requirements (Los Angeles County Department of Public Works, LACDPW, 2002).

General Plan

County of Los Angeles General Plan

The County of Los Angeles General Plan is an advisory document designed to guide policy-making for the future of Los Angeles County. The document contains policies and goals intended to preserve and protect various resources. These conservation policies are intended to protect, maintain and manage ground water recharge and watershed areas, conserve storm and reclaim water, and improve of the quality of imported domestic water, ground water supplies, and natural runoff. Resource protection measures include drainage networks wherein “all water courses should be maintained in as natural a state as possible, minimizing the modification of the natural carrying capacity or production of excessive siltation.”⁵ The following policies are applicable to the proposed project.

Environmental Protection Goal: Conservation of Resources and Environmental Protection

- Policy 18: Conserve the available supply of water and protect water quality.
- Policy 26: Promote the development and use of new and improved water and waste management technology.
- Policy 43: Maintain a balance between increased intensity of development and the capacity of needed facilities such as transportation, water and sewage systems.

Land Use

- Policy 1: Require that new developments in non-urban areas have adequate accessibility to paved roads and water lines of sufficient capacity.

⁵ Los Angeles County General Plan, page 79, January 1993.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. Many of the policies that are applicable to this topic are found in the County of Los Angeles General Plan. Additional policies in the Antelope Valley Areawide General Plan include the following.

- Policy 108: Permit the use of floodways for those recreational uses not involving structures or improvements (except check dams) that could obstruct the natural flow of flood water.
- Policy 110: Require that all newly constructed residences and public facilities located in the flood fringe be suitably flood-proofed.
- Policy 113: Identify planned flow paths and groundwater recharge preserves on the Antelope Valley Comprehensive Plan of Flood Control and Water Conservation for the primary water course and for conservation of storm runoff in the rural areas.

County of Los Angeles Interim Peak Flow Criteria

The proposed project must also comply with the County of Los Angeles' Interim Peak Flow Criteria, which maintains the objective of controlling the post-development peak storm water runoff in order to prevent accelerated stream erosion.⁶ The Peak Flow Standard requires that all post-development runoff from a 2 year, 24-hour storm shall not exceed the predevelopment peak flow rate.

Antelope Valley Interim Drainage Policy

The Proposed Project must also comply with the Antelope Valley Interim Drainage Policy with maintains that each site must be evaluated on a case by case basis in regard to the interim drainage provisions. This requires that developments limit drainage outflow to the before developed condition quantities.

3.7.4 Impacts and Mitigation

Significance Criteria

The criteria used to determine the significance of an impact are based on Appendix G of the *CEQA Guidelines*. For this analysis, implementation of the proposed project would result in redevelopment in the project area may result in significant impacts if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local

⁶ Peak Flow Interim Standard.

groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner that would result in flooding in a manner that would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam;
- Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Require or result in the construction of storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The following impact analysis focuses on potential project impacts related to hydrology and water quality. The evaluation considered project plans, current conditions at the project site, and applicable regulations and guidelines. Based on the project site location and nature of the project, some of the significance criteria listed above do not apply to the project for the following reasons:

Place Housing in Flood Zone – According to the Federal Emergency Management Agency Flood Insurance Rate Map 065043-0300-B (1980), the proposed Phase III project site is located outside the 100-year floodplain (Lovejoy Springs, which is dry except for heavy winter storms and flash flooding events). Therefore the proposed project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, thus there would be no impact with regard to housing.

Place Structures in Flood Zone – As mentioned above, the project site is not located within a 100-year floodplain and therefore would not impede or redirect flood flows. There would be no impact to flooding from the proposed project.

Inundation by Failed Levee or Dam – According to County of Los Angeles Safety Element, the proposed project site is not located within a dam failure inundation boundary. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding. There would be no impact.

Inundation by Seiche, Tsunami, or Mudflow – There are no enclosed bodies of water in the area that could potentially inundate the project site from seiches. The proposed project is located near Lake Los Angeles; however, this man-made lake has been dry for years.

Tsunamis are large ocean waves that are generated by major seismic events. The proposed project site is not located in a potential tsunamis hazard area. Mudflows are generally caused by a combination of slope failure and high volumes of water caused by rain (or in some cases by faulty irrigation), in hilly areas. The proposed project site is relatively flat and is not located within a landslide prone area. Therefore, the proposed project would not be exposed to this potential impact.

Project Impacts

Impact 3.7.1: Construction activities associated with development of the project would not result in impacts on surface water quality through increased sedimentation in stormwater runoff. In addition, development of the project site could result in increased nonpoint source pollution in stormwater runoff during operation (less than significant).

The proposed project would disturb more than one acre of soil, and therefore a Statewide General Construction National Pollutant Discharge Elimination System (NPDES) Permit is required along with submittal of a notice of intent to the State Regional Water Quality Control Board (SRWCB) prior to commencement of construction activities. The project is subject to compliance with the applicable Standard Urban Storm Water Mitigation Plan (SUSMP). Also, development of a Storm Water Pollution Prevention Plan (SWPPP) for the site has been prepared and will be implemented prior to construction.

The proposed project construction activities have a potential to cause erosion, sedimentation, and the discharge of construction debris from the project site. For example, clearing of vegetation and grading activities would lead to exposed or stockpiled soils susceptible to peak stormwater runoff flows. Also, the compaction of soils by heavy equipment may minimally reduce the infiltration capacity of soils (exposed during construction) and increase stormwater runoff and erosion potential. If uncontrolled, these materials could lead to water quality problems, including sediment-laden runoff, prohibited non-stormwater discharges, and ultimately the degradation of downstream receiving water bodies. Consequently, if unabated, short-term impacts to surface waters during construction activities could violate water quality standards or waste discharge requirements and could result in a potentially significant impact.

During project operation, a stormdrain system will include catchbasins and drains to treat and carry the cleaned runoff to an on-site location where rip-rap will be utilized to slow the rate of

discharge. All water discharge must comply with County NPDES and SUSMP requirements so as to avoid a significant impact. Project impacts would be below the level of significance.

Mitigation Measures: None required.

Impact 3.7.2: The proposed development would not result in a net increase in impervious surfaces which would reduce the amount of area available for groundwater recharge thereby impacting available groundwater supplies (less than significant).

The proposed project site is relatively small, approximately 3.0 acres, and construction of the proposed project would not significantly increase the amount of impermeable surfaces or significantly decrease ground percolation of runoff water in the local watershed relative to the total amount of pervious surfaces within the watershed. The proposed parking surfaces would include a partially impervious and partly pervious design, in accordance with the Silver LEED rating, resulting in less of an increase than a traditional development. Therefore, any increase in impervious area on the project site is expected to have a less than significant impact on the groundwater supply or on groundwater recharge efforts.

The proposed project would receive its water supply from the Los Angeles County Waterworks District No. 40 and approximately 34 percent of the 55,000 acre-feet (or 18,700 acre-feet) of annual water demand that the District supplies is derived from groundwater.⁷ The level of increase in impervious surfaces at the site is reduced by the LEED design requirements and is not anticipated to affect the supplies derived from local groundwater wells. Therefore, the proposed project would not substantially deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a substantive net deficit in aquifer volume or a lowering of the local groundwater table level. Thus, the proposed project would not cause the production rate of pre-existing nearby wells to drop to a level which would not support existing land uses or planned uses (for which permits have been granted). A less than significant impact is anticipated.

Mitigation Measures: None required.

Impact 3.7.3: Project development would not increase impervious surfaces which could cause peak runoff to exceed to drainage capacities and cause flooding on or off site (less than significant).

The proposed undeveloped project site is approximately 3.0 acres, and the existing topography is relatively flat. A watercourse is located more than 350 feet north of the project site. The new gymnasium, community building and parking surfaces would not generate significant runoff rates. The project paving would be partially impervious and partly pervious, in accordance with

⁷ Information found in the Southern California Association of Governments website at http://www.scag.ca.gov/wptf/pps/wptf120904_DeanEfsthathiou.ppt#277,2,Slide2.

the Silver LEED rating, resulting in less of an increase than a traditional development. The porous parts of the pavement system will allow runoff water to percolate back into the soil. Additionally, the proposed project would not result in significant topographic changes or other landform modifications that would affect the drainage pattern of the site and surrounding area. Therefore, the project would not substantially alter the existing drainage pattern of the site or area in a manner that would exceed drainage capacities and result in flooding on- or off-site. A less than significant impact is anticipated.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.7.4: The proposed project would not result in adverse cumulatively considerable hydrology or water quality impacts (less than significant).

As with the proposed project, all potential future related are subject to the same federal (Clean Water Act), state (Porter Cologne Water Quality Control Act), and local (SUSMP) regulations that protect water quality and water resources. These regulations include NPDES permit requirements, implementing stormwater pollution prevention plans, and post-development stormwater quality and quantity requirements. All of these regulations are designed to address the incremental effects of individual projects such that they do not cause a cumulatively considerable impact. Therefore, despite the potential for the future related projects, if any, to alter drainage patterns and runoff conditions, the adherence to the aforementioned requirements would ensure that they do not result in cumulatively considerable impacts related to sedimentation, flooding, water quality, drainage system capacity, flood hazard areas, failure of a levee or dam, seiche, tsunami, or mudflows. The proposed project would have a less than significant impact with mitigation measures. Therefore, because of these measures, the proposed project's incremental contribution to water quality and quantity impacts, with proposed mitigation, would not be cumulatively considerable and is less than significant.

Mitigation Measures: None required.

3.8 Land Use and Planning

3.8.1 Introduction

This section addresses the impacts of the proposed project on existing and planned land uses in the project vicinity. The land use analysis considers the compatibility of the proposed project with applicable local and regional policies and regulations, including the Los Angeles County General Plan.

3.8.2 Environmental Setting

Physical Setting

Background

The Los Angeles County General Plan promotes a flexible and innovative agenda for land use planning in the unincorporated County areas.¹ The Department of Regional Planning (DRP) utilizes the most current planning practices in order to create quality communities throughout the unincorporated County. The Land Use Element of the General Plan utilizes innovative planning strategies in addressing land use issues and community needs, and provides the foundation for their further implementation through community plans, specific plans, zoning ordinances, and implementation programs. In addition to promoting land use strategies, the Land Use Element provides direction for more specific land use planning and decision-making activities within unincorporated areas of the County. In general, the General Plan Land Use Element provides guidance for the resolution of specific issues when one of the following conditions exist: 1) The specific issues involved, individually or collectively, constitute a regional land use concern; and 2) No adopted local plan covers the area in question or addresses the issue at hand. Within this context, general conditions and standards for development are set forth where needed to clarify General Plan policy with regard to regional land use concerns, and to provide guidance for decision-making in the absence of applicable community level planning.²

The primary theme of County land use policy is sustainability. Sustainability is a concept that involves the utilization of planning practices that ensure people's needs in the present are met without compromising the ability of future generations to meet their economic, social and environmental needs.³ In addition to sustainability, the General Plan Land Use Element implements several other policies and strategies in order to meet its land use goals and objectives. These policies and strategies can be divided into four overarching themes: 1) Planned Growth; 2) Managed Development; 3) Healthy & Livable Communities; and 4) Community-Based Planning.⁴

¹ County of Los Angeles, 2007 Draft Preliminary General Plan, *Land Use Element*.

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*

Existing Land Uses at the Project Site

The project site is located in northern Los Angeles County, in the unincorporated community of Lake Los Angeles. The project site is an irregularly shaped parcel, located amongst, and directly adjacent to, commercial and residential establishments. The project site is bounded on the south by Avenue P, on the east by 170th Street East, on the northwest by 165th Street East and 164th Street East, and on the north by East Avenue O.

The proposed project would be located on an undeveloped, three-acre piece of the greater 100-acre Stephen Sorensen County Park. The proposed project would be located next to 15-acres of improved park land. In the south-easternmost portion of the park site, previously constructed recreational facilities are visible. The remaining portions of the site are generally undeveloped with rock outcroppings to the west and east and a blue-line ephemeral wash (Lovejoy Springs) that runs the length of the site from the northwest to the southeast. The proposed project site is designated Open Space and zoned RA-20000.

Existing Land Uses in the Vicinity of the Project Site

Lands that surround Stephen Sorensen County Park are developed with single-family residences to the south, commercial uses further to the east along 170th Street East, and single family residences and undeveloped vacant land to the west and north, some of which contains rock outcrops and foothills. The Commercial designated areas associated with the project site are zoned C-2, and concentrated at the intersection of Avenue O and 170th Street East. Residential properties to the east of the project site are zoned R-3-20U. The residential properties to the south of the project site, across Avenue P and off of Lake Los Angeles Avenue, are also zoned R-3-20U. Farther south, beyond the residences zoned R-3-20U, land use consists of additional residential areas zoned for RA-20000. Land uses to the west are also zoned RA-20000. Residential land uses to the north of the site, beyond Avenue O, are zoned RA-30000 and RA-40000. As previously mentioned, the park site lies to the east of, but not within, the SEA No. 53 (Lovejoy Butte).⁵ In addition, to the north of the site, on North 170th Street East, is the Los Angeles County Fire Department, Fire Station #114, which will service the project site.

Significant Ecological Area

As mentioned above, according to the currently adopted County of Los Angeles General Plan, the park site lies to the east of Significant Ecological Area (SEA) No. 53 (Lovejoy Butte). Although the project site is not located within the SEA, the following information is included to ensure the proposed project's compatibility with surrounding land uses. As outlined in the General Plan, the intent of the Significant Ecological Area (SEA) overlay is to identify lands containing important biological resources, in an effort to conserve the County's diverse ecological heritage.⁶ SEAs are important or fragile land and water areas that are valuable as plant or animal communities, often important to the preservation of threatened or endangered species, and conservation of biological diversity in the County. Conservation of the County's biotic diversity is the main objective of the SEA designation, and connectivity between important natural habitats plays an important role in

⁵ *Ibid.*

⁶ County of Los Angeles, 2007 Draft Preliminary General Plan, *Land Use Element*.

maintaining biotic communities.⁷ However, as discussed in detail in Section 3.3, *Biological Resources*, the project site is not located within the Lovejoy Butte SEA No. 53. Thus, no impacts to SEAs are anticipated from implementation of the proposed project.

3.8.3 Regulatory Framework

General Plan

The General Plan serves as the blueprint for future growth and development in Los Angeles County. As a blueprint for the future, the plan contains policies and programs designed to provide decision makers with a solid basis for decisions related to land use and development.

Accordingly, the General Plan, Land Use Element, includes the following general policies regarding land use within the County:

- Goal LU-1: Efficient and progressive land use policies that address the diverse needs of all County residents.
- Goal LU-2: Sustainable communities that conserve resources and protect the environment.
- Policy LU 2.2: Encourage land use conservation initiatives that minimize the consumption of resources and environmentally sensitive areas.
- Policy LU 2.3: Promote efficient community water and energy practices.
- Policy LU 2.4: Preserve and expand green spaces throughout the County.
- Goal LU-3: Development that is compatible with surrounding neighborhood character and the natural environment.
- Policy LU 3.1: Preserve the unique character of existing communities, both urban and rural, through community design initiatives.
- Policy LU 3.2: Prohibit land use development that results in negative environmental impacts, as determined by the California Environmental Quality Act (CEQA).

The General Plan Conservation, Open Space and Recreation Element also includes the following general policies regarding land use:

- Goal C/OS-2: A balanced and interconnected network of passive and active local parks, regional recreation areas and trail systems.
- Policy C/OS 2.1: Develop and expand regional and local parkland and trail systems in the County.
- Policy C/OS 2.3: Direct resources to communities that are under served by local parks.
- Policy C/OS 2.4: Improve current parks and trail systems with needed amenities.

⁷ *Ibid.*

- Policy C/OS 2.5: Design parks and trails for optimal safety and security.
- Goal C/OS-4: Effective inter-jurisdictional coordination and collaboration in all aspects of park and open space planning.
- Policy C/OS 4.1: Participate in a collaborative, inter-jurisdictional system that manages and preserves County open spaces.
- Policy C/OS 4.2: Promote joint-use agreements to increase and enhance park and recreation opportunities.

Hillside Management Areas

Furthermore, to preserve the natural beauty of hillsides in the unincorporated County, land use activities that may result in environmental degradation are subject to regulations and design guidelines that limit hillside development based on slope, soil, natural drainage channels and seismic and fire hazards. These areas, known as Hillside Management Areas, are defined as mountainous or foothill terrain having a natural slope of 25 percent or more.⁸ By imposing these design conditions, a more sensitive development occurs in a manner that respects the natural topography and biological resources of the area. Accordingly, the County utilizes the Hillside Management Ordinance and the Hillside Management Conditional Use Permit (CUP) as regulatory mechanisms which take into consideration the potential environmental degradation and hillside alteration that could occur in areas designated as Hillside Management Areas. The proposed project site has been designated by the General Plan as a Hillside Management Area. As such, the General Plan, Conservation and Open Space Element includes the following policies relevant to the proposed project:

- Goal C/OS-11 Protected visual and scenic resources.
- Policy C/OS 11.2 Manage development in hillside areas to protect their natural and scenic character and minimize risks from natural hazards, such as from fire, flood, erosion and landslides.

Antelope Valley Areawide General Plan and Area Zoning

According to the General Plan, the Land Use Element is designated to provide general land use policy for the County and therefore does not discuss the County's zoning and subdivision codes in detail.⁹ As such, where appropriate, specific code citations and additional planning documents are included as references to help clarify General Plan goals and policies. For the proposed project, the General Plan refers to the Antelope Valley Areawide General Plan (AVAGP) for the project site's land use designation and zoning. According to the AVAGP Land Use Policy map, the land use designations for the Lake Los Angeles area within the vicinity of the site are Urban 1 (U-1) and Open Space (O) designated areas, as well as Non-Urban 1 (N-1), Non-Urban 2 (N-2),

⁸ *Ibid.*

⁹ County of Los Angeles Department of Regional Planning, *Antelope Valley Areawide General Plan: A component of the Los Angeles County General Plan*, Adopted December 4, 1986. Accessed online at http://planning.co.la.ca.us/doc/plan/drpd_antelopevalley.pdf.

and Commercial (C) areas. The project site is designated Open Space and zoned R-A-20000. The following policy applies to all residential designations within the AVAGP:

- Residential density designations in the Antelope Valley should be considered as average densities for the total proposed development site to promote clustering, the provision of additional open space, and the avoidance of hazardous lands. Clustering shall be defined as the rearrangement of units allowed within a single land use classification on a project site. When this option is exercised, the open space should be classified by the County as non-buildable area until demolition of the project or revision of the General Plan. As a component of this consideration, a suitable open space maintenance agreement shall be required for the life of the development.

In addition, areas designated for non-urban land uses are also considered to be part of the Residential land use designation. Land designated as N-1 have an allowable density of 0.5 dwelling units per acre, while land designated as N-2 have an allowable density of 1.0 dwelling units per acre. As described in the AVAGP, non-residential uses requiring or appropriate for, remote locations may be allowed in Non-urban areas. These uses include, but are not limited to: private and commercial recreational uses and specialized activities such as nature study centers, scientific research and educational camps, lodges and retreats, and visitor accommodations, services and facilities when designed in a manner compatible with and sensitive to surrounding scenic and natural resources.¹⁰

Open Space (OS) areas in the AVAGP are considered to be lands under public or private ownership that are essentially free of structures and roads, and are projected to be maintained in an open or natural state on a long-term basis.¹¹ These areas are primarily managed for recreational purposes, the protection of natural resources, and/or for purposes of safe-guarding public health and safety. Other uses for public lands designated as open space would include parks, public golf courses driving ranges, camps, picnic areas, boating areas, amusement parks, and dune buggy parks.¹²

According to the AVAGP, development within the Commercial land use designations generally serves several adjoining neighborhoods. Typical land uses in areas designated for commercial land use designations include supermarkets, drug stores, small clothing stores and gift shops, hardware stores, branch banks, small restaurants, etc. Many of the small retail and supporting outlets found in the large shopping centers typify what may be expected in a community shopping center.¹³

Significant Ecological Areas

The Antelope Valley Areawide General Plan has identified several land uses which are inherently compatible with SEAs. Although the project site is not located within the SEA, the following information is included to ensure the proposed project's compatibility with surrounding land uses. These activities include regulated scientific study; passive recreation including wildlife

¹⁰ *Ibid.* p. VI-6.

¹¹ *Ibid.*

¹² *Ibid.*

¹³ *Ibid.*

observation and photography; and limited picnicking, riding, hiking, and overnight camping. Additional uses may also be compatible, as determined by a detailed biotic survey of the area, and could include:¹⁴

- 1) Residential uses at densities compatible with the resource values present and consistent with the community character in terms of both overall density and magnitude.
- 2) Commercial uses of minor nature serving local residents and visitors.
- 3) Where no alternative site or alignment is feasible, public and semi-public uses essential to the maintenance of public health, safety and welfare;
- 4) Agricultural uses compatible with the resource values present;
- 5) Where compatible with identified biotic resources, extractive uses including oil and gas recovery, and rock, sand and gravel quarrying; and
- 6) Uses related to the conservation of water.

Draft West Mojave Plan

The *Draft West Mojave Plan* is a habitat conservation plan (HCP) and federal land use plan that is being jointly prepared by the Bureau of Land Management and other by agencies having administrative responsibility or regulatory authority over species of concern within the West Mojave Desert. The *Draft West Mojave Plan* will define a regional strategy for conserving plant and animal species, such as the desert tortoise and Mohave ground squirrel, as well as their habitats. The plan will also develop an efficient, equitable, and cost-effective process for complying with threatened and endangered species laws. The plan will enable the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) to issue programmatic biological opinions and incidental take permits more efficiently. The plan area extends from Olancho in Inyo County on the north to the San Gabriel and San Bernardino Mountains on the south, and from the Antelope Valley on the west to the Mojave National Preserve on the east. While the proposed project site is entirely within the *West Mojave Plan* area, this HCP has not been adopted by the Bureau of Land Management at this time. As such, the proposed project would not be subject to the policies and regulation outlined in the plan.

3.8.4 Impacts and Mitigation

Methodology

Land use impacts are assessed based upon the physical effects related to land use compatibility and consistency with adopted plans and regulations (e.g. policies and goals listed above). Specifically, this section of the EIR addresses the potential environmental impacts related to compatibility and/or consistency with regard to on-site and adjacent land uses and applicable plans and regulations. Information obtained from the site visit was used to analyze specific

¹⁴ *Ibid.* p. VI-18.

physical impacts of the proposed project for potential land use compatibility impacts. In addition, aerial photographs, land use maps, and field surveys were also used to conduct this analysis.

Significance Criteria

The *CEQA Guidelines* Appendix G provides guidance for assessing the significance of potential environmental impacts. For this analysis, the proposed project would result in significant impacts if the project would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Project Impacts

Impact 3.8.1: The proposed project would not physically divide an established community (less than significant).

The project site is within the unincorporated Los Angeles County boundary, within a rural residential area zoned for R-A-20000.¹⁵ Surrounding properties are zoned R-3-20U and C-2 to the east, R-3-20U to the south, R-A-20000 within the park to the west and R-A-20000 beyond the park to the west. Lands that surround Stephen Sorensen County Park are developed with single-family residences to the south, commercial uses further to the east along 170th Street East, and single family residences and open space to the west and north, some of which contains rock outcrops and foothills. Also, located to the north of the site, on North 170th Street East, is the Los Angeles County Fire Department, Fire Station #114, which will service the project site. Directly to the east of the project site is the developed portion of Stephen Sorensen County Park.

The proposed park expansion will not physically divide an established community. As mentioned in Chapter 2, *Project Description*, the proposed project's objectives are to provide a quality, up-to-date recreational facility that meets the growing demands of the community, and to respond to the need for expanded and enhanced community recreational amenities. As such, the proposed project is intended to serve an existing demand for recreational amenities in the area.

Implementation of the proposed project is intended to serve the existing communities that frequently utilize the park for active and passive recreational activities. In addition, the proposed improvements would take place entirely within the existing footprint of the currently established 100-acre recreational facility. Therefore, land uses at the site would not deviate significantly from existing conditions, as no new or incompatible land uses would be introduced upon full build-out of the project. Lastly, Stephen Sorensen Park has been established for years and could be considered a part of the existing community. Therefore, the Gymnasium/Community Building

¹⁵ Information based on Los Angeles County, Department of Regional Planning GIS-NET, accessed on June 27, 2008 at http://regionalgis.co.la.ca.us/imf/sites/GISNET_pub/jsp/launch.jsp.

Project of Stephen Sorensen County Park would not physically divide an established community, and the proposed project would have a less than significant impact.

Mitigation Measures: None required.

Impact 3.8.2: The proposed project would not conflict with applicable land use plans, policies or regulations of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect (less than significant).

The site is located within the unincorporated area of Los Angeles County, and is governed by the policies, procedures, and standards set forth in the General Plan. The Land Use Policy Map in the Land Use Element of the General Plan describes dominant land use characteristics within the County and provides a policy framework for developing areawide, community, and neighborhood plans. As previously mentioned, the County of Los Angeles has zoned the project site R-A-20000.¹⁶ Furthermore, the proposed project site is also governed by the AVAGP. According to the AVAGP Land Use Policy map, other land uses within the vicinity of the site include U-1 and O areas, as well as Non-Urban 1 (N-1), Non-Urban 2 (N-2), and Commercial (C) areas.

As discussed above, the proposed park expansion would be limited to a small portion of land adjacent to the existing development at Sorensen County Park. Specifically, the site for the proposed Gymnasium/Community Building is approximately three acres, or approximately 0.03 percent of the existing recreational facility. The proposed project is designed with the objectives of expanding the existing park to fully meet ADA requirements for buildings, including restroom facilities, walkways, and a parking lot; providing a quality, up-to-date recreational facility that meets the growing demands of the community; responding to the need for expanded and enhanced community recreational amenities; and maintaining and enhancing open space and recreational opportunities within the County of Los Angeles.

The recreational land uses and related facilities proposed by the project would be compatible with the various land use plans, policies, and regulations applicable to the site. The proposed project would not conflict with the land use designation or zoning as described in the Land Use Element of the General Plan, or with the zoning policies outlined in the AVAGP. Additionally, non-urban hillside development (i.e. areas of land containing slopes of 25 percent or more) is also compatible with certain public land uses, including recreational land uses, according to the County General Plan. Additionally, the proposed project would adhere to all regulations outlined by the Hillside Management Ordinance. Lastly, as mentioned above, the proposed project site is located near, but not within, SEA No. 53 (Lovejoy Butte). According to AVAGP, passive recreational activities would be compatible land uses with SEAs. Therefore, the proposed project would also not introduce an incompatible land use to the vicinity of the SEA.

¹⁶ *Ibid.*

In summary, the proposed project would not conflict with any applicable land use plans, policies or regulations of an agency with jurisdiction over the project. Impacts resulting from project implementation would be considered less than significant.

Mitigation Measures: None required.

Impact 3.8.3: The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan (less than significant).

The proposed project is not located within a federally-adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) or within any other approved local, regional, or state habitat conservation plan. Although the site is located within the *West Mojave Plan* area, this HCP has not been adopted by the Bureau of Land Management, the lead agency, at this time (BLM, 2006). Therefore, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan, at this time, and there would be no impact (please refer to Chapter 3.3, *Biological Resources*, for additional information about the *Draft West Mojave Plan*). The project would have a less than significant impact.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.8.4: The proposed project would not contribute to an adverse cumulative land use impact (less than significant).

This analysis is based on the Cumulative Projects List provided in Chapter 2, *Project Description*, of this EIR. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area¹⁷. Based on the list provided, there are no related projects within a five-mile radius of the proposed project. In the vicinity of the proposed project, there are currently no planned projects. Any potential future related projects would be required to comply with general Plan policy and obtain approvals and environmental clearance to assure compliance with County requirements and CEQA. It is anticipated that through the CEQA and County review processes, that related project impacts would be eliminated or reduced to the extent feasible. Because the proposed project would not conflict with applicable plans and policies governing site uses, the incremental impact of the proposed project would not contribute to any cumulative impact.

Mitigation Measures: None required.

17 Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.9 Noise

3.9.1 Introduction

This section provides an overview of the existing noise environment at the proposed project site and surrounding area (including noise measurements taken June 26, 2008), the regulatory framework, an analysis of potential noise impacts that would result from implementation of the proposed project, and mitigation measures where appropriate.

3.9.2 Environmental Setting

Noise Principles and Descriptors

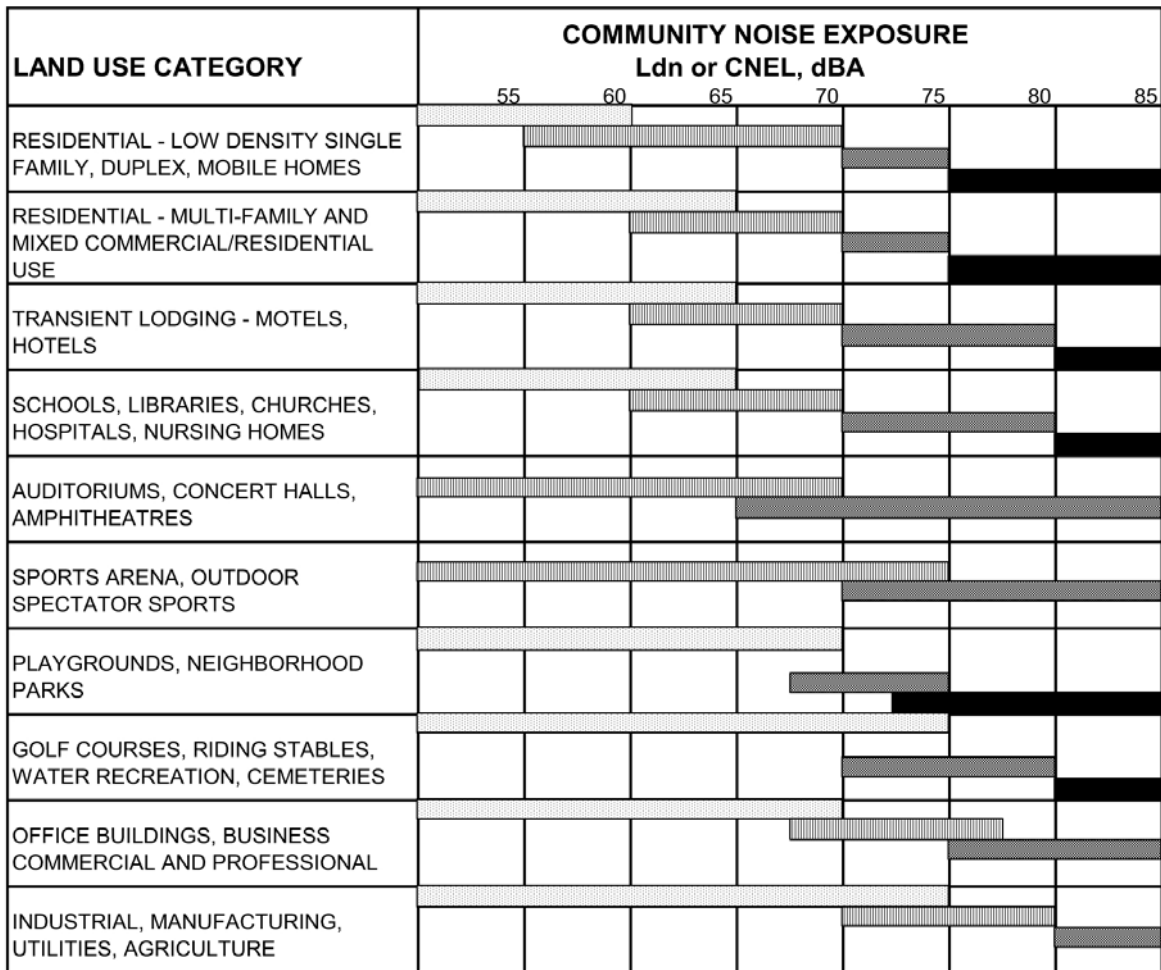
Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ears decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 3-6**.

Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Figure 3-4 are representative of measured noise at a given instant in time; however, they rarely persist consistently over a long period of time. Rather, community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure,



CLEARLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



CONDITIONALLY ACCEPTABLE
If new construction or development proceeds, an analysis of the noise reduction requirements should be made and needed noise insulation features included in the design.



NORMALLY ACCEPTABLE
New construction or development should be undertaken after an analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



NORMALLY UNACCEPTABLE
New construction or development should generally not be undertaken, unless it can be demonstrated that an interior level of 45 dBA can be achieved.

** Please note that these guidelines are general and may not apply to specific sites.*

with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions.

What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- Leq: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- Lmax: The instantaneous maximum noise level for a specified period of time.
- L50: The noise level that is equaled or exceeded 50 percent of the specified time period. The L50 represents the median sound level.
- L90: The noise level that is equaled or exceeded 90 percent of the specified time period. The L90 is sometimes used to represent the background sound level.
- DNL: Also termed Ldn, the DNL is the 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- CNEL: Similar to the DNL the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m., in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the Leq during the peak-hour is generally equivalent to the DNL at that location (Caltrans, 1998).

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (the drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate of between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 1998).

Fundamentals of Vibration

As described in the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* (FTA, 2006), ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds

to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the affect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV and the FTA threshold of human annoyance to ground-borne vibration is 80 RMS (FTA, 2006).

Existing Noise Environment

The noise environment surrounding the proposed project site is influenced primarily by traffic on Avenue P. Noise levels away from these noise sources can be quite low depending on the amount of nearby human activity.

A Metrosonics Model db308 sound level meter was used on June 26, 2008 to measure the existing ambient noise levels at various locations on the proposed project site. The meter was calibrated to ensure the accuracy of the measurements. One long-term and three short-term noise level measurements were taken around the proposed project site. The noise measurement results are presented below in **Table 3.9-1**.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, rest homes, and hospitals are

**TABLE 3.9-1
EXISTING NOISE ENVIRONMENTS AT PROJECT LOCATION**

Location	Time Period	Leq (dBA)	Noise Sources
Long-term Measurement: Measurement was taken in front of the park between entrances.	24 hour CNEL measurement: 59	Hourly Average Leq's ranged from: 51, 62	Unattended noise measurements do not specifically identify noise sources.
Short-term Measurement 1: Measurement was taken in front of the park between entrances.	06/26/08 4:20 □ 4:30 PM	10-minute Leq 62 dBA	Car: 72 dBA Wind: 76 dBA Lowest Reading: 35 dBA
Short-term Measurement 3: Measurement was taken just east of the baseball field.	06/26/08 4:50 □ 5:00 PM	10-minute Leq 60 dBA	18 wheel truck: 65 dBA Traffic: 65 dBA Lowest Reading: 43.3 dBA
Short-term Measurement 4: Measurement was taken at the intersection of McKennas Gold and 167 th St East, 1 block south of the Park.	06/26/08 5:20 □ 5:30 PM	10-minute Leq 57 dBA	Car: 72 dBA Resident walking: 56 dBA A/C unit hum: 47 dBA

SOURCE: ESA, 2008.

generally more sensitive to noise than commercial and industrial land uses. The nearest sensitive receptors to the proposed project are single-family homes located approximately 250 feet south of the project.

3.9.3 Regulatory Framework

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

State

California Code of Regulations has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state pass-by standard is consistent with the federal limit of 80 dB. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24,

California Code of Regulations). The noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dBA. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Local

County of Los Angeles General Plan and the Antelope Valley Areawide General Plan

The Los Angeles General Plan Noise Element sets various goals and policies that would apply to projects in Los Angeles County. The following goals are applicable to the proposed project.

- Goal 1: Reduce transportation noise to a level that does not jeopardize health and welfare.
- Goal 2: Minimize noise levels of future transportation facilities
- Goal 3: Establish compatible land use adjacent to transportation facilities
- Goal 4: Allocate noise mitigation costs among those who produce the noise.
- Goal 5: Alert the public regarding the potential impact of transportation noise.
- Goal 6: Protect areas that are presently quiet from noise impacts.

County of Los Angeles Municipal Code

The following are applicable County regulations related to noise:

CNEL-based standards are used to make land use decisions as to the suitability of a given site for its intended use and are applicable primarily to those noise sources not amenable to local control such as on-road traffic, aircraft, trains, etc. Project-related noise issues center on noise from vehicle operations potentially impacting nearby residents. Noise sources not pre-empted from local control are regulated by ordinance (Section 12.08.390 of the Los Angeles County Code).

Table 3.9-2 summarizes the allowable exterior noise levels by the Los Angeles County Noise Ordinance for various land uses. An average noise level of 50 dB (50th percentile, or “L₅₀”) by day and 45 dB L₅₀ for residential areas at night is the standard applicable to the nearest residential properties. The Ordinance also establishes the maximum allowable noise exposure for all land uses. In residential areas, daytime noise exposure is not to exceed 70 dB for any period of time; nighttime noise exposure should not exceed 65 dB for any period of time (Los Angeles County Noise Ordinance).

Table 3.9-3 in the Los Angeles County Noise Ordinance regulates construction noise levels and allowable hours of construction operation.

**TABLE 3.9-2
LOS ANGELES COUNTY NOISE STANDARDS**

Noise Zone	Land Use (Receptor Property)	Time Intervals	Exterior Noise Level (dB) for Standard Number				
			L ₅₀	L ₂₅	L _{8.3}	L _{1.7}	L ₀
I	Noise-Sensitive Area	Anytime	45	50	55	60	65
II	Residential Properties	10 PM TO 7 AM	45	50	55	60	65
		7 AM TO 10 PM	50	55	60	65	70
III	Commercial Properties	10 PM TO 7 AM	55	60	65	70	75
		7 AM TO 10 PM	60	65	70	75	80
IV	Industrial Properties	Anytime	70	75	80	85	90

NOTES: L₅₀ □ Noise levels which may not be exceeded for a cumulative period of more than 30 minutes in any hour; L₂₅ □ Noise levels which may not be exceeded for a cumulative period of more than 15 minutes in any hour; L_{8.3} □ Noise levels which may not be exceeded for a cumulative period of more than 5 minutes in any hour; L_{1.7} □ Noise levels which may not be exceeded for a cumulative period of more than 1 minute in any hour; and L₀ □ Noise levels which may not be exceeded for any period of time.

SOURCE: Los Angeles County Noise Ordinance

**TABLE 3.9-3
LOS ANGELES COUNTY ALLOWABLE CONSTRUCTION NOISE LEVELS**

Time	Single Family Residential (dBA)	Multifamily Residential (dBA)	Semi-Residential Commercial (dBA)	Business Structures (dBA)
Mobile Equipment ^a				
Daily, except Sundays and legal holidays, 7:00 AM to 7 PM	75	80	85	85
Daily, 7 PM to 7:00 AM, and all day Sunday and legal holidays	60	65	70	85
Time	Single Family Residential (dBA)	Multifamily Residential (dBA)	Semi-Residential Commercial (dBA)	Business Structures (dBA)
Stationary Equipment ^b				
Daily, except Sundays and legal holidays, 7:00 AM to 7 PM	60	65	70	
Daily, 7 PM to 7:00 AM, and all day Sunday and legal holidays	50	55	60	

NOTES:

^a Maximum noise levels for non-scheduled, intermittent, short-term operation (less than 10 days) of mobile equipment.

^b Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment.

SOURCE: Los Angeles County Noise Ordinance.

3.9.4 Impacts and Mitigation

Methodology

Noise impacts are assessed based on a comparative analysis of the noise levels resulting from the proposed project and the noise levels under baseline or existing conditions. Analysis of temporary construction noise effects is based on typical construction phases and equipment noise levels and attenuation of those noise levels due to distances between sensitive receptors in the project vicinity and the construction activity. Non-transportation-related noise impacts were assessed by examining the proposed uses on-site.

Vibration from construction can be evaluated for potential impacts at sensitive receptors. Typical activities evaluated for potential building damage due to construction vibration include demolition, pile driving, and drilling or excavation in close proximity to structures. The ground-borne vibration can also be evaluated for perception to eliminate annoyance. Vibration propagates according to the following expression, based on point sources with normal propagation conditions:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

Where PPV (equip) is the peak particle velocity in in/sec of the equipment adjusted for distance, PPV (ref) is the reference vibration level in in/sec at 25 feet, and D is the distance from the equipment to the receiver. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration and is often used in monitoring of vibration because it is related to the stresses experienced by structures.

In order to determine potential for annoyance, the RMS vibration level (Lv) at any distance (D) shall be estimated based on the following equation:

$$Lv(D) = Lv(25 \text{ ft}) - 30\log(D/25)$$

Significance Criteria

Based on Appendix G of the *CEQA Guidelines*, a project may be deemed to have a significant effect on the environment with respect to noise and/or ground-borne vibration if it would result in:

- Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the proposed project vicinity above levels existing without the proposed project;
- A substantial temporary or periodic increase in ambient noise levels in the proposed project vicinity above levels existing without the proposed project;

- Exposure of people residing or working in the proposed project area to excessive noise levels (for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport); or
- Exposure of people residing or working in the proposed project area to excessive noise levels (for a project within the vicinity of a private airstrip).

The following analysis does not discuss the last two significance criteria because they were found to have no impact. Both criteria relate to airports and airstrips, and the project site is not located within an airport land use plan, is not within two miles of a public airport or public use airport, and is not within the vicinity of a private airstrip.

Project Impacts

Impact 3.9.1: Activities associated with the construction of the proposed project would not result in the generation of noise, which potentially could adversely affect adjacent sensitive receptors (e.g., residences) (less than significant with mitigation).

Construction activity noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction activities associated with the proposed project would involve excavation, grading, and earth movement. **Table 3.9-4** shows typical noise levels during different construction stages. **Table 3.9-5** shows typical noise levels produced by various types of construction equipment.

Construction of the proposed project would generate noise corresponding to the appropriate phase of building construction and the noise generating equipment used during those phases. Only minimal excavation (4,000 cubic yards) for a short duration is proposed for the site. During construction, the project may require an export of 4,000 cubic yards of soil to the Antelope Valley Recycling Center or the Antelope Valley Recycling Center landfills (or part to each). This soil would be delivered in multiple loads over a multiple-day and week schedule (first part of the 3 month grading program).

The closest sensitive receptors to the project site are several residential properties 250 feet or more south of the project site. Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA for every doubling of distance, and thus other sensitive receptors in the project vicinity would be exposed to construction noise at incrementally lower levels. Assuming an attenuation rate of 6 dBA per doubling of distance, the closest residences to the park entrance could be exposed to 75 dBA Leq for short durations, which would be within the County Noise Ordinance standards shown in Table 3.9-3.. All other construction activities would be further from the closest residences and noise levels from all activities would be substantially less than 75 dBA Leq due to increase distance between the project construction activities and the off-site sensitive receptors. Compliance with the County Noise Ordinance limits (Table 3.9.3), which further limits construction noise levels allowed at night [7 p.m. to 7 a.m.] and on Sundays and legal holidays, would assure that construction noise impacts would be less than significant. The following mitigation measures are added to the project to assure the project would be in compliance with the County Noise Ordinance.

**TABLE 3.9-4
TYPICAL CONSTRUCTION NOISE LEVELS**

Construction Phase	Noise Level (dBA, Leq) a
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

NOTE:

a Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.

**TABLE 3.9-5
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

Construction Phase	Noise Level (dBA, Leq) a
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Backhoe Finishing	85

SOURCE: Cunniff, Environmental Noise Pollution, 1977.

Mitigation Measures: None required.

NOI-1: Construction Operation Hours and Noticing. Project construction will be limited to between the hours of 7:00 a.m. and 4:00 p.m. (which is reduced from the normally allowable Los Angeles County construction hours of 7:00 a.m. and 7:00 p.m.). Signs shall be posted on-site informing neighbors of the duration and hours of the construction activities.

NOI-2: Construction Equipment Maintenance. All on-site construction equipment shall be inspected weekly by the contractor to ensure that they have properly operating mufflers and that are in good operating condition.

NOI-3: Construction Staging Areas. All construction staging areas will be as far away as is practical from the nearest homes. Construction staging will occur adjacent to the area of grading in the proposed parking lot area, which is no closer than 250 feet from the nearest sensitive noise receptors. The staging for construction of the Gymnasium/Community Building will occur on the proposed parking lot area of the site. Staging for the parking lot will occur on other open areas of the park.

Significance after Mitigation: Less than significant.

Impact 3.9.2: Activities associated with the construction of the proposed project would not result in the generation of ground-borne vibration, which potentially could adversely affect adjacent sensitive receptors (e.g., residences) (less than significant).

As shown in **Table 3.9-6**, use of heavy equipment for project construction (e.g., large bulldozer) generates vibration levels of up to 0.089 PPV or 87 RMS at a distance of 25 feet. The nearest sensitive receptor to construction would be approximately 250 feet from occasional heavy equipment activity and could experience vibration levels of 0.003 PPV and 57 RMS. Vibration levels at these receptors would not exceed the potential building damage threshold of 0.2 PPV or the annoyance threshold of 80 RMS. Other sensitive receptors in the project vicinity would be exposed to vibration levels at incrementally lower levels. This impact would be less than significant without mitigation.

**TABLE 3.9-6
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT**

Equipment/Activity	PPV at 25 ft (inches/second)^a	RMS at 25 ft (Vdb)^b
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79

^a Buildings can be exposed to ground-borne vibration levels of 0.2 PPV without experiencing structural damage.

^b The human annoyance response level is 80 RMS.

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

Mitigation Measures: None required.

Impact 3.9.3: Operational noise associated with near-and long-term development of the proposed project would not result in permanent increases in the ambient noise environment (less than significant).

Future noise levels associated with operation of the proposed project would likely be similar to noise levels associated with existing conditions. Noise levels would be subject to the County Noise Standards (see Table 3.9-2). Because the project has a limited number of new parking spaces and gymnasium activities will be indoors, project operations would be expected to be in compliance with the County Noise Ordinance standards (as they affect receiving residential properties (Noise Zone II) shown in Table 3.9-2. The traffic section indicates that the project would only generate 332 trip ends daily and 25 trip ends during the peak hour. Thus, any increased noise from project operation would be a less than significant impact.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.9.4: Increases in traffic from the project in combination with other development would not result in cumulatively considerable noise increases (less than significant).

A cumulative impact arises when two or more individual projects, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant impacts, meaning that the project's incremental effects must be viewed in connection with the effects of past, current, and probable future projects. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area¹. Based on the list provided, there are no related projects within a five-mile radius of the proposed project.

Notably, any project that would individually have a significant noise impact would also be considered to have a significant cumulative noise impact. When considered alone, the proposed project would not generate enough traffic to cause a significant increase in noise to the area. As such the project would not have a cumulatively considerable traffic impact and would be less than significant without mitigation. Additionally, future projects would individually be responsible for assessing and mitigating potential noise impacts.

Mitigation Measures: None required.

¹ Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.10 Public Services

3.10.1 Introduction

This Chapter analyzes the Project's potential impacts to fire protection, police protection, emergency medical response services, schools, libraries, parks and hospitals.

3.10.2 Environmental Setting

Fire Protection and Emergency Medical Response Services

The Los Angeles County Fire Department (LACFD) is responsible for fire prevention/suppression and emergency services in the Lake Los Angeles area. Regionally, the department provides fire, emergency medical, and rescue services from 170 stations.

The proposed project lies within the jurisdiction of Battalion 17, which consists of a total of eight stations. The Lake Los Angeles area is directly served by Station No. 114. However, all stations within the LACFD are available to service the community of Lake Los Angeles if needed. In addition, the San Bernardino County Fire Department and the National Park Service are available indirectly to provide fire services to the Lake Los Angeles area if needed.

Station No. 114 is located at 39939 N 170th Street East Lake, Los Angeles, California and is approximately .5 miles from the project site.¹ This station houses two engines, and two patrol trucks and is staffed with one Captain, one Engineer, one Fire Fighter Paramedic, and five on-call/volunteer Fire Fighters. During 2006, there were 1253 district calls made in Station No. 114's jurisdiction: 150 were related to fires; 909 were medical emergencies; and 19 were other types of emergencies². There were an additional 175 false alarms/non-emergency calls for service.

LACFD manages and administers local emergency medical services including immediate medical care and patient transport to definitive care in an appropriate hospital setting. Responsibilities of LACFD include response to day-to-day medical emergencies in addition to planning and preparing for disaster medical response. As noted earlier, Fire Station No. 114 is the primary responder to the proposed project site. Station No. 114 would provide emergency medical services to the project site with minimal response times.

Fire Flows

Required water supply for fire suppression varies with the type of development, life hazard, type and level of occupancy, and degree of fire hazard (based on such factors as building age or type of construction) and land use. This required water supply is termed "fire flow," which is a measure of performance capacity, ensuring that water lines supply water with adequate pressure during emergencies. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows would

¹ County of Los Angeles Fire Department, Fire Chief P. Michael Freeman, response to NOP, August 6, 2008.

² Information from the Los Angeles County Fire unofficial website, *lacountyfire.com*, accessed on June 25, 2008.

be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.³ Fire flow water supply is currently provided through a 12-inch diameter pipeline operated by Los Angeles County Waterworks District No. 40. The pipeline is located along Avenue P and the southwestern boundary of the project site (see section 3.12, Utilities for a description of existing water supplies).

Wildfire Hazards

As referenced in Section 3.6, Hazards and Hazardous Materials, the Lake Los Angeles area is subject to wildfire hazards due to existing native habitat, such as creosote brush scrub and Joshua tree woodland. Most wildfires occur in the fall and winter months, during Santa Ana conditions and are fueled by high winds, steep terrain and chaparral vegetation. The project site is located in a rural area and is surrounded by relatively flat terrain, which lessens the fire hazard severity in the area. For more information about wildfires as a hazard, please see Section 3.6, Hazards and Hazardous Materials.

Police Protection

The project site is served by two law enforcement agencies, the Los Angeles County Sheriff's Department (LACSD), Lancaster station and the Los Angeles County Police, Office of Public Safety (OPS). These agencies are responsible for providing for the protection of citizens, the enforcement of laws, and crime prevention. Law enforcement service includes patrol, traffic enforcement, accident analysis and investigation, parking enforcement, general and special investigation and the Community Support Unit. The LACSD Lancaster station is located at 501 W. Lancaster Boulevard in Lancaster, and has 229 sworn personnel and 78 civilian personnel assigned for duty⁴. In addition, the station has 42 sheriff's Reserve Deputies and 134 Sheriff's Volunteers. Station personnel cover an area of more than 600 square miles, including the communities of Lake Los Angeles, the Antelope Acres, Quartz Hill and Lancaster. The LACSD Lancaster station provides services for over 190,000 residents.⁵ In 2007 the station's average emergency response time was 5.4 minutes⁶. The Los Angeles County Police OPS is a specialized law enforcement agency that provides services to patrons, employees and properties of County Departments who contract out for such services. OPS employ 491 sworn and 142 civilian personnel with an \$83 million budget, which makes it the fourth largest law enforcement agency in the county of Los Angeles and one of the largest in the state of California. The Parks Service Bureau of the Los Angeles County OPS provides vehicle, bicycle and foot patrols at more than 126 regional parks, lakes, and nature trails.

Schools

Students residing in the Lake Los Angeles community may lie within the jurisdiction of three school districts, Wilsona Elementary School District, Kepple Union School District, and

³ County of Los Angeles Fire Department, Fire Chief P. Michael Freeman, response to NOP, August 6, 2008.

⁴ City of Lancaster, Los Angeles County Sheriff's Department, *Law Enforcement Report*, September 2007.

⁵ Information from the Los Angeles County Sheriff's Department website, www.lasd.org/stations/for1/landcaster/index.html, accessed on December 11, 2006.

⁶ City of Lancaster, Los Angeles County Sheriff's Department, *Law Enforcement Report*, September 2007.

Antelope Valley Union High School District. In addition to these school districts, one private school, Cornerstone Christian Academy, exists in the Lake Los Angeles area.

Wilsona Elementary School District operates one middle school (grades 6-8), two elementary schools (grades K-5), and one Academy (grades K-8). The current student enrollment for this district totals approximately 2,017 students, and the average students per teacher ratio totals 21.1 students/teacher (s/t).⁷ Within this School District, Vista San Gabriel Elementary is the nearest school to the project site and is located approximately 1.5 miles east of the project site.

Keppel Union School District operates one middle school (grades 7-8) and five elementary schools (grades K-6). The current student enrollment for this district totals approximately 3,090 students, and the average students per teacher ratio totals 21.1 s/t.⁸ Within this School District, Lake Los Angeles Elementary is the nearest school to the project site and is located approximately 1.3 miles south of the project site.

Antelope Valley Union High School district operates 14 high schools. The current enrollment for this district totals approximately 25,312 students and the average students per teacher ratio totals 25.1 s/t.⁹ Within this School District, Littlerock High School is the closest high school to the project site. It is located approximately 6.36 miles west of the project site.

Cornerstone Christian Academy is a private school located approximately 0.88 mile north of the project site. This school's grade levels range from kindergarten to eighth grade. The current enrollment at this school is 59 students, and the students per teacher ratio totals 10.7 s/t.¹⁰

Libraries

The Lake Los Angeles Community is served by the Los Angeles County Public Library system, a network of community libraries throughout the County of Los Angeles. The Lake Los Angeles Library is located at 16921 E. Ave. O approximately 0.86 miles north of the project site. The library is housed in a 3,245 square-foot facility, and its current collection includes 59,280 books, audio recordings, videocassettes as well as magazine and newspaper subscriptions. Services available to customers include an on-line public access catalog; a public access internet workstation; a public access CD-ROM workstation (with Word Processor); children's programs; a coin-operated copy machine; and friends of the library rental collection.¹¹

Hospitals

The two nearest hospitals to project site include Antelope Valley Hospital and Lancaster Community Hospital.

⁷ Information from the U.S. Department of Education, Institute of Education Sciences National Center for Education Statistics official website, www.nces.ed.gov, accessed June 25, 2008.

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ *Ibid.*

¹¹ Information from the County of Los Angeles Public Library accessed at <http://colapublib.org/libs/lakelosangeles/>, accessed June 25, 2008.

Antelope Valley Hospital is located in Lancaster, approximately 18.7 miles northwest of the project site. It is a 420-Bed acute care hospital. The address of the hospital is 1600 W. Avenue J, Lancaster, CA 93534.

Lancaster Community Hospital is also located in Lancaster, approximately 19.25 miles northwest of the project site. It is a 117-Bed acute care hospital. The address of the hospital is 43830 10th Street West, Lancaster, CA 93534.

Both hospitals include heart centers, inpatient and outpatient physical therapy, inpatient and outpatient surgery, radiology, and 24-hour emergency services. The Antelope Valley Hospital provides obstetrical services, and a full maternity and pediatrics unit in addition to the aforementioned services.

Parks and Recreation

There are three Los Angeles County parks located within the vicinity of the Sorensen Park Facility, Jackie Robinson County Park, Pearblossom Park and Everett Martin Park.

Jackie Robinson County Park is located at 8773 E Avenue R, Littlerock, California, approximately 8.37 miles west of the project site. This 9.24 acre recreation area offers after school programs, cheerleading, computer classes, drill drum and marching corps, exercise and dance classes, holiday and vacation day camps, senior activities, and youth and adult sports leagues. Park facilities include BBQ's, a children's play area, class/multipurpose rooms, a community building, a computer lab, a gymnasium, horseshoe pits, a kitchen, a picnic shelter, picnic tables, a lighted softball diamond, and a t-ball diamond.

Pearblossom Park is located at 33922 121st Street East, Pearblossom, approximately 8.51 miles south of the project site. This 7.8 acre park offers afternoon recreational drop-in activities for youths, holiday special events, senior programs, shuffle board activities, the South Antelope Valley Youth Sports Association Program, summer day camps, table tennis tournaments, and the Toddler Time Day Camp. Park facilities include a basketball court, a community recreation building; a covered patio area with a stage, horseshoe pits, picnic tables, shuffleboard courts; and a lighted softball field.

Everett Martin Park is a 6.7-acre park is located at 35548 North 92nd Street East, Littlerock, CA 93543. The park's facilities include two playgrounds, an outdoor basketball court, a swimming pool, and picnic tables.

3.10.3 Regulatory Framework

Quimby Act

State Subdivision Map, Section 66477 (The Quimby Act) allows the legislative body of a City or County, by ordinance, to require the dedication of land, the payment of fees in-lieu of, or a combination of both, for park and recreational purposes as a condition to approval for a final tract map or parcel map. The Quimby Act requires that developers set aside land, donate conservation

easements, or pay fees for park improvements. The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements.

Los Angeles County Proposition A Grants

Formally known as the Los Angeles Safe Neighborhood Parks Act, this proposition provided for the formation of the Los Angeles County Regional Park and Open Space District and was created to improve the quality of life in the county through the preservation of beaches, renovations and improvement of new and existing recreational facilities, and restoration of rivers, streams and trails.

Los Angeles County General Plan

The existing Los Angeles County General Plan describes issues and provides goals and policies related to public services provided for Los Angeles County residents. The following General Plan goals and policies for public services are relevant to the project:

Environmental Protection Goal and Policies

- Goal: Conservation of resources and environmental protection.
- Policy 13: Promote a distribution of population consistent with service system capacity, resource availability, environmental limitations and accessibility.
- Policy 14: Direct urban development and revitalization efforts to protect natural and man-made amenities and to avoid severe hazard areas such as flood prone areas, active fault zones, steep hillsides and landslide areas and fire hazard areas.
- Policy 21: Stress the development of community parks particularly in areas of the greatest deficiency, and take advantage of opportunities to preserve large natural scenic areas.
- Policy 23: Ensure that development in non urban areas is compatible with rural lifestyles, does not necessitate the expansion of urban service systems, and does not cause significant negative environmental impacts or subject people and property to serious hazards.

Economy and Employment Goal and Policies

- Goal: A strong diversified economy and full employment.
- Policy 43: Maintain a balance between increased intensity of development and the capacity of needed facilities such as transportation, water and sewage systems.
- Policy 62: Improve the quality and accessibility of critical urban services including crime control, health, recreational and educational services.
- Policy 63: Maintain high quality emergency response services.

Land Use Element

Coordination with Public Services Goal and Policy

- Goal: To provide for land use arrangements that take full advantage of existing public service and facility capacities.
- Policy 2: Discourage the development of existing substandard parcels when it is determined that such development individually or in combination with adjacent existing and/or proposed development, will result in overburdening of existing and/or planned public services and facilities.

Cultural Goal and Policy

- Goal: To preserve and protect sites of historical, archaeological, scenic and scientific value.
- Policy 18: Encourage open-space easements and dedications as a means of meeting scenic, recreational and conservation needs.

Hazards Goal and Policy

- Goal: To reduce the risk to life and property from seismic occurrences, flooding, erosion, wildland fires and landslides.
- Policy 29: Discourage isolated development in wildland fire hazard areas and develop stricter brush clearance ordinances to protect existing structures.

Recreation Goal and Policies

- Goal: To improve opportunities for a variety of outdoor recreational experiences.
- Policy 30: Provide low intensity outdoor recreation in areas of scenic and ecological value compatible with protection of these natural resources.
- Policy 31: Develop local parks in urban areas as part of urban revitalization projects, wherever possible.

Recreational Opportunities Goal and Policies

- Goal: Adequate regional recreation opportunities for County residents and visitors.
- Policy 2: Provide diverse recreational opportunities.
- Policy 4: Refine and reestablish standards in accord with the current understanding of needs and use of regional recreation areas and facilities.
- Policy 5: Provide a wider range of recreational areas and facilities identified as having regional significance.

Safety Element

Wildland and Urban Fire Hazards Goal and Policies

- Goal: Reduce threats to public safety and protect property from wildland and urban fire hazards.
- Policy 17: Continue efforts to reduce all fire hazards, with special emphasis on reducing hazards associated with older buildings, multistory structures, and fire-prone industrial facilities; and maintain an adequate fire prevention capability in all areas.
- Policy 18: Expand and improve vegetation management efforts in wildland fire hazard areas.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. The following policies are applicable to the proposed project.

- Policy 201: Maintain standards to reduce levels of fire and geologic risk.
- Policy 203: Require all new development and appropriate existing development to comply with established fire and geologic safety standards.

Land Development Unit: General Requirements

The County of Los Angeles Fire Department, Land Development Unit's comments are only general requirements during the Environmental Review Process. Specific fire and life safety requirements will be addressed and conditions set at the building and fire plan check phase. There may be additional requirements during this time.

- The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.
- The proposed development may necessitate multiple ingress/egress access for the circulation of traffic, and emergency response issues.
- Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.
- Fire Department requirements for access, fire flows and hydrants are addressed during the building permit stage.

Commercial Requirements

- Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is strongly suggested that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.
- Fire hydrant spacing shall be 300 feet and shall meet the following requirements:
 - a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.
 - b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant.
 - c. When cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and mid block.
 - d. Additional hydrants will be required if the hydrant spacing exceeds specified distances.
- Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.
- All on-site driveways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The 28-foot width does not allow for parking, and shall be designated as a Fire Lane, and have appropriate signage. The centerline of the on-site driveway shall be located parallel to and within 30 feet of an exterior wall on one side of the proposed structure. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building.
- The 28 feet in width shall be increased to:
 - a. Provide 34 feet in width when parallel parking is allowed on one side of the access way.
 - b. Provide 36 feet in width when parallel parking is allowed on both sides of the access way.
 - c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.
 - d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.¹²

¹² County of Los Angeles Fire Department NOP response. August 6, 2008. Fire Chief P. Michael Freeman.

3.10.4 Impacts and Mitigation

Significance Criteria

The significance criteria for this analysis have been developed from criteria presented in Appendix G of the *CEQA Guidelines*. For this analysis, the proposed project would result in significant impacts to public services if the project had a significant impact to the follow criteria.

- Would the project result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
 - Fire protection;
 - Police protection;
 - Schools;
 - Parks; or
 - Other public facilities.

Project Impacts

Impact 3.10.1: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives (less than significant).

The project does not propose to construct residences and would not increase the population in the area. The proposed project is an expansion of the existing recreational opportunities and will not necessitate substantial additional services from the Fire Department, particularly considering the code-compliant design of the new facilities. Therefore, the proposed project is anticipated to have a less than significant effect on fire services.

Mitigation Measures: None required.

Impact 3.10.2: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives (less than significant).

The project does not propose to construct residences and would not increase the population in the area. The proposed project is an expansion of the existing recreational opportunities and will not necessitate substantial additional police services. Therefore, the project would have a minimal

demand for police services and would not cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the proposed project is anticipated to have a less than significant effect.

Mitigation Measures: None required.

Impact 3.10.3: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools. The construction of which could cause significant environmental impacts (no impact).

The proposed project is a recreational facility with associated uses and a corresponding parking lot. The project does not contain a residential component and no impact to school services would occur. Therefore, the proposed project will not physically impact schools by causing the need for altered or additional facilities.

Mitigation Measures: None required.

Impact 3.10.4: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered parks. The construction of which could cause significant environmental impacts (no impact).

The proposed project is a recreational facility and will not require the construction of any new or physically altered park facilities due to the construction of the site. Please see Recreation, below, for further details. The project adds additional ADA compliant recreational activities to the area without eliminating existing ones. The expansion of the park would not have adverse effects on surrounding recreational facilities.

Mitigation Measures: None required.

Impact 3.10.5: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered public facilities. The construction of which could cause significant environmental impacts (no impact).

The proposed project will not cause the need for any new or physically altered public facilities. It would provide improved park facilities for public outreach and use.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.10.6: The proposed project would not result in a substantial cumulative impact to public services (less than significant).

The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area¹³. Based on the list provided, there are no related projects within a five-mile radius of the proposed project. There are no impacts associated with any potential future development, when considered with the project's impacts, could result in cumulatively considerable environmental effects. Any potential future project, however, would be subject to review by the Fire and Police Departments and applicable school districts, and would undergo the appropriate level of environmental review by the County. Preparation of an appropriate CEQA document would be required if potentially significant impacts are anticipated (i.e., IS/MND/EIR). Any environmental documents for those projects must discuss project impacts, and individual project mitigation measures may be required to reduce environmental impacts to all applicable public services. Individual project conditions can also be applied to reduce security and fire hazards. The proposed project is located in an area that is currently served by public services (i.e., police, fire, schools, libraries, parks and hospitals). Existing services can be readily extended into the area to serve the proposed project and the proposed demand for public services would be minimal. The proposed project does not have an individually significant impact on public services, and would not have a cumulatively considerable contribution to these services. Therefore, the proposed project would not have a significant cumulative impact on public services in the area.

Mitigation Measures: None required.

¹³ Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.11 Transportation Traffic

3.11.1 Introduction

This section addresses potential traffic and circulation impacts associated with implementation of the proposed project. An evaluation of the potential impacts associated with implementation of the proposed project, an evaluation of cumulative traffic impacts, and proposed mitigation measures to reduce any potentially adverse significant impacts to less than significant levels. A discussion of applicable state, local and regional plans and/or programs also is included.

3.11.2 Environmental Setting

Project Site Access

Stephen Sorensen County Park is located in the unincorporated community of Lake Los Angeles in northern Los Angeles County, California. The Assessor's Parcel Number (APN) for the site is 3073-001-902. The park is located at 16801 East Avenue P, approximately 15 miles east of Palmdale (Thomas Bros. Map page 4199, 2007). Local access to the project site is provided from 170th Street East and Avenue P. Regional access to the project site is provided by State Route 138 (SR-138), which is approximately six miles to the south. This highway is a west-east trending highway that connects to SR-14 to the west, and to Interstate 15 (I-15) to the southeast.

Primary access to the park is provided at the intersection of East Avenue P and 170th Street East. Access to the proposed Gymnasium/Community Building Project site would be via an extension of the parking lot/driveway on the west end of the existing developed portion of the park site. No new driveway access points to adjacent streets are proposed. Ninety-four (94) existing parking spaces are located to the south and southeast of the proposed park project.

3.11.3 Regulatory Framework

Congestion Management Program Compliance

The purpose of the state-mandated CMP is to monitor roadway congestion and assess the overall performance of the region's transportation system. Based upon this assessment, the CMP contains specific strategies and improvements to reduce traffic congestion and improve the performance of a multi-modal transportation system. Examples of strategies include increased emphasis on public transportation and rideshare programs, mitigating the impacts of new development and better coordinating land use and transportation planning decisions.

Based on the approval of Proposition 111 in 1990, regulations require the preparation, implementation, and annual updating of a Congestion Management Program in each of California's urbanized counties. One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants, and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process.

Authority for local land use decisions including project approvals and any required mitigation remains the responsibility of local jurisdictions.

The criteria for which a project is subject to the regulations as set forth in the CMP are determined by the trip generation potential for the project. Currently, the average daily trips (ADT) threshold is 2,400 vehicles of peak hour trips. The proposed project that would generate less than 2,400 vehicles during peak hours and is not subject to the CMP guidelines for traffic analysis.

California Department of Transportation (Caltrans)

The California Vehicle Code establishes height, weight, length, and width restrictions for vehicles and their loads.¹ Vehicles or loads that exceed these limitations are considered oversize and require a special permit to operate on the state highway system. The Code authorizes Caltrans to issue special permits for the movement of these oversize vehicles along specified routes on the state highway system. The Code authorizes county and city governments, to issue special permits for movement of oversize vehicles through their jurisdictions.

Destination 2030:2008 Regional Transportation Plan²

Destination 2030 is SCAG's RTP for its member counties. The RTP focuses on improving the balance between land use and current as well as future transportation systems. SCAG develops, maintains and updates the RTP on a three-year cycle.

Los Angeles County General Plan

New projects within the County of Los Angeles must comply with the Congestion Management Program (CMP) for Los Angeles County³ that was adopted by the MTA in November 1995 pursuant to state law. The CMP involves monitoring traffic conditions and performance measures on the designated transportation network, analysis of the impact of land use decisions on the transportation network, and mitigation to reduce impacts on the transportation network.

Appendix D of the CMP includes Transportation Impact Assessment (TIA) guidelines.⁴ The TIA guidelines require analysis at monitored street intersections and segments, including freeway on- and off-ramp intersections where a project is expected to add 50 or more peak hour vehicle trips and mainline freeway or ramp monitoring locations where a project is expected to add 150 or more peak hour trips. If a project does not add, but merely shifts trips at a given monitoring location, the CMP analysis is not required.

¹ California Department of Motor Vehicles, *California Vehicle Code Section 35000*, January 2005.

² The 2008 RTP was adopted by the Regional Council of the Southern California Association of Governments (SCAG) on May 8, 2008. The final 2008 RTP is available at <http://www.scag.ca.gov/rtp2008/final.htm>.

³ MTA, *Congestion Management Program (CMP) for Los Angeles County, Appendix D*, November 1995.

⁴ *Ibid.*

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. The following policies are applicable to the proposed project:

Policy 108: Encourage development of access throughout the Antelope Valley.

- a. As development occurs in each community, appropriate links should be provided from residential areas to major destination points (e.g., employment, shopping, public facilities and services, recreation and entertainment). As an option to the automobile, public transportation within each community will be encouraged.
- b. Support public transportation from outlying, low-density communities to urban area services and functions as feasible. Emphasis will be placed on service to those of highest need (e.g., the low-income and elderly who are dependent on public services).

Policy 92: Conduct a public transit demonstration program in the Antelope Valley. If viable, public transit programs such as service for transit dependent (e.g., poor, elderly, or young) and those who desire an alternative to the private motor vehicle will then be considered.

3.11.4 Impacts and Mitigation

Methodology

To evaluate proposed project impacts on the local street network, anticipated project-generated trips were calculated, using the Institute of Transportation Engineers (ITE) manual. These trips were then analyzed against the significance criteria above to determine potential impacts. The timing of the peak hours for typical park projects is taken into consideration. Typical peak hours of park use do not coincide with the peak hours for the roadway network. However, since the greatest impacted time on the roadway network is the peak commuting hours, these are the time periods examined as they are the time periods where significant impacts are most likely to occur.

Significance Criteria

California Environmental Quality Act

The *CEQA Guidelines* Appendix G provides guidance for assessing the significance of potential environmental impacts. For this analysis, the proposed project would result in significant impacts if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;

- Result in adequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnout, bicycle racks).

The County's threshold for when a traffic report is generally needed is generation of over 500 trips per day,⁵ as typically projects under that limit do not generate significant impacts. One criterion was eliminated from further consideration and will not be discussed here. This criterion addresses changes in air traffic patterns. The proposed project is not located within the vicinity of an airport and would therefore not impact air traffic patterns.

Impact 3.11.1& Impact 3.11.2: The proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) nor would the project exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways (less than significant).

Stephen Sorensen County Park is located on the northwest corner of Avenue P and 170th Street East. Access to the proposed park is provided by two driveways on Avenue P, on the south side of the park. The westerly driveway is the closest to the proposed Gymnasium/Community Building Project site. Local access to the project site is provided from Avenue P and 170th Street. Regional access to the project site from the south and east is provided by State Route 138 (SR-138), which is approximately six miles south of the site. It is an east-west trending highway that turns northward and merges with SR-14 (Antelope Valley Freeway) to the west.

Palmdale Boulevard is an east-west trending primary road that connects with SR-14 to the west and terminates at 240th Street East to the east, approximately six miles from the intersection Palmdale Boulevard and 170th Street East. Additionally, Avenue Q (an east-west trending secondary road) provides local access to 170th Street East.

The proposed project would add a Gymnasium/Community Building to an existing park. Peak activity times for parks are generally outside typical peak roadway traffic hours, because many patrons attend the park before or after their daytime activities (e.g., work or school). Vehicle trip generation associated with the proposed project is shown in the **Table 3.11-1** below.

The proposed project is estimated to generate about 332 trip ends daily (166 inbound / 166 outbound). Peak hour traffic would be expected to average 23 vehicles during the morning (between 7:00 a.m. and 9:00 a.m.) and 24 vehicles during the evening (between 4:00 a.m. and 6:00 p.m.). These estimates are worst-case, as the County has restricted the hours of operation of the project, such that the morning peak hour would be less affected. The project facilities will be open to the limited hours of 9:00 a.m. to 10:00 p.m. Monday through Friday, and from 10:00 a.m.

⁵ Traffic Impact Guidelines, County of Los Angeles, Department of Public Works, January 1, 1997.

**TABLE 3.11-1
PROJECT TRIP GENERATION**

Trip Generation per 1,000 Square Feet Gross Floor Area ITE Rate □ Recreational Community Center (495)								
Project	Size - Sq Ft	Daily	Estimated Peak Hour Vehicle Trips					
			AM Peak	In	Out	PM Peak	In	Out
		22.88	1.62	0.61	0.39	1.64	0.29	0.71
Community Center -Gymnasium	14,500	332	23	14	9	24	7	17

to 10:00 p.m. Saturdays and Sundays, except for occasional events where extended hours of operation shall be approved by the Los Angeles County Department of Parks and Recreation (but in no case later than 12:00 midnight). These events would occur up to approximately ten times a year, based on a public decision, and would be posted on-site prior to the event occurrence.

The trip generation estimated is based on the average trip ends per 1,000 square feet of gross floor area. The Institute of Transportation Engineers (ITE) land use code for this rate is 495 – Recreational Community Center. The ITE land use is described as a stand-alone public facility similar to and including YMCA's. These facilities often include classes and clubs for adults and children, basketball/volleyball courts, weightlifting and gymnastics equipment and locker rooms.

Roadway peak hours are typically between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m., which are typical commuting hours. Under standard traffic patterns (ITE rates) for this type of project, the impact during peak traffic hours would be minimal, at 23 during the morning peak hour and 24 during the evening peak hour, and the proposed project's daily traffic generation falls below the threshold of 500 trips per day. The proposed project will have less than a significant impact on traffic conditions and road capacity using these calculations. Further, with the restricted morning hours (opening at 9:00 a.m.), morning peak hour impacts would be even further reduced.

Mitigation Measures: None required.

Impacts 3.11.3: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (no impact).

The proposed project is an expansion of the existing recreational facilities at Stephen Sorensen County Park. Both the Gymnasium/ Community Building and parking lot are designed with convenient existing driveway access off of Avenue P, with good roadway visibility (driveways located on a non-curving portion of the roadway). The proposed project is located in a rural residential community and will not pose hazards due to design features. Therefore, the proposed project will have no adverse effect.

Mitigation Measures: None required.

Impacts 3.11.4: The proposed project would not result in inadequate emergency access (no impact).

The proposed project site will be serviced by the Los Angeles County Fire Department, Battalion 17 Fire Station #114. Fire Station #114 is located on 39939 N 170th Street East. The Fire Department currently has adequate access to the project site via Avenue P and to the project vicinity via Palmdale Boulevard, Avenue O and 170th Street East. The proposed project will comply with all design requirements and standards of the building fire code. The proposed project will have no adverse effect on emergency access.

Mitigation Measures: None required.

Impacts 3.11.5: The proposed project would not result in inadequate parking capacity (no impact).

The proposed project contains a parking lot component. Current parking spaces (for existing, previously developed park uses) are located to the south and southeast of the proposed park project. There are currently 94 parking spaces provided on-site. The proposed gymnasium will have an adjacent parking lot containing an additional 57 parking spaces, for a total of 151 parking spaces provided on-site). Existing parking facilities are “over built” for existing facilities, which reduced the total needed for new Gymnasium/Community Building parking. Originally it was anticipated that a community building would be part of the previous park improvements. However, it was not constructed; thus an overage of parking spaces exists.

Alternate means of transportation can also be used to access the park site. The proposed project is intended to serve nearby neighboring communities, many of which are within walking or biking distance of the site. The Los Angeles County Department of Regional Planning requires a minimum of 149 parking spaces for the existing park development plus the proposed Gymnasium/Community Building Project (all parking requirements are subject to final plot plan approval by the Los Angeles County Department of Regional Planning and the Los Angeles County Department of Public Works, Building and Safety Division). With the addition of 57 new parking spaces, the park will provide 151 spaces, two more than Regional Planning requirements. Therefore, the park project will not result in inadequate parking.

Mitigation Measures: None required.

Impacts 3.11.6: The proposed project would not conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnout, bicycle racks) (less than significant).

The proposed project develops adjacent park land into a recreational facility to serve the surrounding neighboring communities. The project will not conflict with any adopted policies, plans or programs supporting alternative transportation. Although, alternative means of transportation such as walking or biking can be used to access the new gymnasium/ community building. The proposed project will have no adverse effect on policies or plans supporting alternative transportation.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.11.7: Cumulative development would not significantly impact local intersections and street segments in the project vicinity during construction (less than significant).

The proposed project has been designed to minimize circulation conflicts and would have a less than significant impact; therefore, it would not make a cumulatively considerable contribution to hazards associated with project features or incompatible uses. The Los Angeles Department of Regional Planning, Impact Analysis Division was contacted to obtain a list of related projects in the area⁶. Based on the list provided, there are no related projects within a five-mile radius of the proposed project. All potential future projects would be required to be designed to minimize hazards associated with project features or incompatible uses consistent with County requirements. Each related project would likely undergo CEQA review to assure that any impacts are appropriately evaluated and, if necessary, mitigated. Therefore, it is likely that cumulative impacts would be less than significant.

The proposed project would have a less than significant impact on emergency access during operation and construction activities, and therefore the proposed project would not make a cumulatively considerable contribution regarding emergency access. All future projects would be required to provide adequate emergency access consistent with County requirements, and would likely undergo CEQA review by the County to assure that any impacts are appropriately evaluated, and if necessary, mitigated. Therefore, cumulative impacts would be less than significant.

The proposed project would exceed the County's parking requirements and have a less than significant impact, and therefore would not make a cumulatively considerable contribution to this impact. Furthermore, each related project would be required to comply with existing County's parking requirements and would likely undergo CEQA review to assure that any impacts are appropriately evaluated and, if necessary, mitigated.

All future projects would be required to comply with existing regulations and undergo CEQA review to assure that any impacts are appropriately evaluated and, if necessary, mitigated. The

6 Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

proposed project would have a less than significant impact regarding adopted policies, plans or programs supporting alternative transportation. Therefore, the proposed project would not make a cumulatively considerable contribution to impacts on alternative transportation policies.

Cumulative impacts would be less than significant and no mitigation is required. Therefore, the proposed project would not create a cumulatively considerable contribution to increases in traffic levels during construction or operation. Cumulative impacts would be less than significant and no mitigation is required.

Mitigation Measures: None required.

3.12 Utilities

3.12.1 Introduction

This Section analyzes the Project's potential impacts to water supply, stormwater, wastewater, solid waste, electricity and natural gas.

3.12.2 Environmental Setting

Water Supply

The Los Angeles County Department of Public Works (LADPW) – Waterworks District No. 40 (District) is the water provider for the Lake Los Angeles Community. The District's State Water Project (SWP) water contractor is the Antelope Valley East Kern Water Agency (AVEK). The District is a public water agency that serves eight regions within Los Angeles County including, Lancaster (Region 4), Desert View Highlands (Region 34), Pearblossom (Region 24), Littlerock (Region 277), Sun Valley (Region 33), Lake Los Angeles (Region 38), Northeast Los Angeles County (Region 35), and Rock Creek (Region 39). The District's water sources are from local groundwater and SWP water from Northern California.

The Antelope Valley Groundwater Basin (Basin) is the only local source of water supply for the District and is comprised of two aquifers (commonly referred to as the deep aquifer and the principal aquifer). Safe-yield of the groundwater basin is defined as the amount of groundwater that can be extracted without exceeding natural recharge. Overdraft is the condition where annual extraction exceeds the safe-yield. Pumping of groundwater by all uses, collectively, has significantly exceeded the natural recharge to the Basin. The basin is estimated to have 68 million acre feet of storage of which 20 million AF is currently available. In the long term, the Basin cannot sustain current pumping levels. According to AVEK and the District, the basin has been in a state of overdraft for eight to nine years.¹

The District currently operates 38 active groundwater wells in the Lancaster, Pearland, and Buttes sub-basins of the Basin. The District pumped between 12,000 and 22,000 acre-feet per year from the Basin in each of the last five years. In 2005, the District initiated an Aquifer Storage Recovery (ASR) to inject and store treated SWP water in the Basin for later use to supplement available water supplies. Since the initiation of the ASR, the District has stored 3,000 acre-feet of SWP water in the Basin.²

In addition to groundwater, the District purchases imported SWP water from AVEK. AVEK is proportioned up to 141,400 acre-feet of SWP water per year. SWP's yearly allotment fluctuates depending on precipitation, regulatory restrictions, legislative restrictions, and operational

¹ Los Angeles County Department of Public Works, Rosamond Community Services District, Quartz Hill Water District, Los Angeles County Sanitation Districts, *2005 Integrated Urban Water Management Plan for the Antelope Valley*, December 16, 2005.

² *Ibid.*

conditions. However, the IUWMP estimates that approximately 119,300 acre-feet per year of AVEK's full yearly allotment will be available to serve the Antelope Valley in the future.

The SWP's watershed encompasses the mountains and waterways around the Feather River. Rain and melting snow run off mountainsides and into waterways that lead into Lake Oroville. When water is needed, water is released from Lake Oroville into the Feather River. It travels down the river to where the river converges with the Sacramento River, the state's largest waterway. Water flows down the Sacramento River into the Sacramento-San Joaquin Delta. From the Delta, water is pumped into the California Aqueduct³.

The Antelope Valley is served by the East Branch of the California Aqueduct. The bulk of the water imported by AVEK is treated and distributed to customers throughout its service area through Domestic-Agricultural Water Network (DAWN) Project facilities.⁴

The DAWN Project consists of:

- More than 100 miles of water distribution pipeline;
- Four Water Treatment Plants; and
- Four 8 million gallon water storage reservoirs near Mojave, and one 3 million gallon capacity reservoir at Vincent Hill Summit.

In Spring 2007 the first ever voluntary shut down of the SWP pumps was done to protect the Delta smelt and other pelagic (open water) fish. In Fall 2007, the shutdown and other actions were found to be incapable of increasing the number of Delta smelt. This led to a Federal court imposed interim set of rules that would restrict operations of the SWP until a new Federal biological opinion on Delta smelt is prepared in 2008. On August 31, 2007 a Preliminary Injunction was issued, which included a series of restrictions on the operation of the pumps that supply water for the Sacramento-San Joaquin Delta to the SWP. The injunction will remain in effect until the State Department of Water Resources obtains a take permit under the Federal Endangered Species Act to allow for the incidental death of the threatened Delta smelt. At that time, long-term reduction in SWP water availability will probably result from the mitigation requirements for the take permit.

On January 28, 2008, the California Department of Water Resources issued its State Water Project Delivery Reliability Report 2007 Draft (Reliability Report), an assessment of the SWP supply availability and reliability. The report considered reductions in State Water Project supplies due to climate change and Bay Delta biological impacts by rerunning the CALSIM II Model to determine revised Table A (state-wide) supplies.

There are two AVEK water treatment plants that serve the District. The combined treatment plant capacity is 75 million gallons per day (mgd). The District receives approximately 87 percent of the water produced by AVEK. However, during the hot summer months, the District receives, on

³ Los Angeles County Department of Public Works, Rosamond Community Services District, Quartz Hill Water District, Los Angeles County Sanitation Districts, *2005 Integrated Urban Water Management Plan for the Antelope Valley*, December 16, 2005.

⁴ *Ibid.*

average, 70 percent of the flow from AVEK's Quartz Hill Treatment Plant and all of the flow from AVEK's Eastside Treatment Plant for a total of 55 mgd. In addition, the District's wells can produce a total capacity of 40 mgd, supplying the summer demand with 95 mgd. During the summer, the daily demand in the District is roughly twice the average day demand. By 2015, the daily summer demand in the District is expected to approach 160 mgd. Currently, the District is in the process of constructing and designing 10 new wells to serve the area and expects to have them online by summer 2008.⁵

In early 2006, a Facilities Planning Report (Report) for the North Los Angeles County Recycled Water Project. This Report identifies potential recycled water users and provides preliminary designs and cost estimates to construct a recycled water distribution system in the Antelope Valley. Approximately 13,600 acre-feet of recycled water per year can be used by the District's existing and future customers.

Water Usage

The IUWMP projects a population growth within the District between 2005 and 2020 of 176,065 people and a corresponding increase in overall yearly water usage in the District of 58,200 acre-feet per year.⁶ The IUWMP projected water usage for the years 2005 through 2030. The projected water usage for 2010 (projection year closest to 2008) totals 85,900 acre-feet per year.

Water Facilities

The District Operates and maintains the public water distribution system for domestic demand and fire protection needs. The Lake Los Angeles community is rural and does not contain much pipeline infrastructure. Currently, two water mains exist within the immediate project area. One water main consists of a 12-inch diameter pipe that bisects the existing park and connects to a nearby housing tract. The other water main consists of a 12-inch diameter pipe that runs along Avenue P and the project site's southwestern boundary. The project area is within the 2992 pressure zone of the District system.

Wastewater and Sewage

The project site is located in an area without a public sewer system. Other developments within the vicinity, including the existing park facility, currently rely on septic systems to properly dispose of wastewater and sewage.

⁵ Antelope Valley-East Kern Water Agency, 2005 Urban Water Management Plan, December 2005.

⁶ Los Angeles County Department of Public Works, Rosamond Community Services District, Quartz Hill Water District, Los Angeles County Sanitation Districts, *2005 Integrated Urban Water Management Plan for the Antelope Valley, December 16, 2005*.

Stormwater

The project is located in an area without a public stormdrain system. Other developments in the vicinity rely on streets, roadside ditches, as well as various limited on-site improvements where necessary to avoid flooding. The existing park facility collects stormwater that is released to an off-site open space area (see section 3.7 Hydrology for additional information regarding stormwater handling).

Solid Waste

Waste Management of Antelope Valley (Waste Management) is located at 1200 City Ranch Road in Palmdale and provides all solid waste collection and disposal services to the Lake Los Angeles Area. Waste Management has a service area of 120 square miles, from 110th Street West to 110th Street East, north of Avenue M. The two closest disposal facilities to the project site within Waste Management's jurisdiction are Antelope Valley Recycling and Disposal Facility and Lancaster Landfill and Recycling Center.

The closest landfill to the project site is Antelope Valley Recycling and Disposal Facility, located at 1200 West City Ranch Road in Palmdale approximately 18 miles west of the project site. This Class III landfill (Class III landfills dispose of non-hazardous wastes) consists of two fully permitted landfills, Landfill I (LF I) and Landfill II (LF II). Presently, both LF I and LF II are permitted to operate Monday through Saturday. LF I is 72 acres in size, with a 57-acre active disposal area and LF II is a 108-acre facility with a 57-acre disposal area. These two landfills are currently separated by 11.0 acres of unused property. Materials accepted by the landfill include municipal solid wastes, appliances, tires, clean dirt, concrete, woodwaste, and greenwaste. Hazardous materials are not accepted.

The maximum permitted capacity for Antelope Valley LF I is approximately 7,400,000 cy. The maximum permitted daily capacity of LF I is 1,400 tpd. In November 2003, the estimated remaining capacity was approximately 2,000,000 cy (27 percent) and as of February 2006, the estimated remaining capacity is 1.1 million cy (15 percent).

LF II is slightly larger than LF I, with a total permitted capacity of 9.2 million cy. LF II has a daily permitted capacity of approximately 1,800 tpd. LF II's total remaining capacity is equal to that of its permitted capacity (9.2 million cy), as it is a new facility. The Antelope Valley Landfill has received between 1,100 and 1,400 tpd over the past three years. This daily waste flow is anticipated to increase due to regional needs and continued growth in the Antelope Valley.

Plans to join the two landfills into one area were expected to occur during 2007. The 11-acre expansion is anticipated to extend the facility's operations past the year 2025.

The Antelope Valley Environmental Collection Center (AVECC) recently opened a permanent facility at the Antelope Valley Landfill. The AVECC is in a joint partnership with the Cities of Lancaster and Palmdale, the California Integrated Waste Management Board (IWMB), County of Los Angeles, Supervisor Antonovich's office, and Waste Management Inc.

The second closest landfill to the project site is Lancaster Landfill and Recycling Center, located at 660 E Avenue F in Lancaster approximately 19 miles northwest of the project site. It is located within the unincorporated territory of Los Angeles County on 276 acres of land, with a 209-acre disposal site. Operations occur Monday through Saturday. The facility offers waste disposal and recycling services, and accepts agricultural, non-friable asbestos, construction/demolition, contaminated soil, green materials, industrial, inert, mixed municipal, sludge, and tire wastes. The facility has a green-waste recycling program in place. The maximum permitted daily deposit to the Lancaster Landfill is 1,700 tons per day. According to Waste Management, they collect an average of approximately 1,300 to 1,600 tons of waste per day, which is deposited at Lancaster Landfill. Waste Management is requesting a tonnage increase from Los Angeles County to permit deposits up to 3,000 tons per day. The landfill is projected to stay open and serve the existing and future community until 2025.

Electricity

Southern California Edison (SCE) is the primary electricity service provider to the Lake Los Angeles Community. A variety of sources provide electricity to SCE, including coal, nuclear and hydroelectric plants throughout the western states. Service is not bound by jurisdictional boundaries, as SCE distributes power to a 50,000 square mile service area and a population of 12 million people through 4.6 million business and residential accounts.

Power is initially delivered from the California grid to transformers in the Antelope Valley, where the voltage is then reduced and transmitted to eight distribution or neighborhood substations throughout the area through high voltage electrical lines. At each of the neighborhood substations the voltage is once again stepped down, and finally distributed to users.

Natural Gas

Natural gas service to the Lake Los Angeles Community is provided by the Southern California Gas Company (SCG) whose total service territory encompasses approximately 20,000 square miles throughout central and southern California. SCG maintains a 30-inch supply line to the Antelope Valley. Currently, a gas main exists along Avenue P and the project site's southeast boundary.

3.12.3 Regulatory Framework

Federal

On October 1, 1977, the Federal Energy Regulatory Commission (FERC) was created through the Department of Energy Organization Act, and FERC assumed the responsibilities of its predecessor, the Federal Power Commission. FERC's legal authority comes from the Federal Power Act of 1935, the Natural Gas Act (NGA) of 1938, and the Natural Gas Policy Act of 1992. It is an independent regulatory agency within the Department of Energy that:

- Regulates the transmission and sale of natural gas for resale in interstate commerce;

- Regulates the transmission of oil by pipeline in interstate commerce;
- Regulates the transmission and wholesale of electricity in interstate commerce;
- Licenses and inspects private, municipal, and state hydroelectric projects;
- Oversees environmental matters related to natural gas, oil, electricity, and hydroelectric projects;
- Administers accounting and financial reporting regulations and conduct of jurisdictional companies; and
- Approves site choices as well as abandonment of interstate pipeline facilities.

The Safe Drinking Water Act (SDWA) Amendments of 1996, the Safe Drinking Water Act of 1974, PL 93-523, and the Safe Drinking Water Act of 1986, PL 99-339, establish a federal program to monitor and increase the safety of all commercially and publicly supplied drinking water.

State

California Department of Water Resources

The mission of the California Department of Water Resources is to manage the water resources of California in cooperation with other agencies, to benefit the state's people, and to protect, restore, and enhance the natural and human environments. Its responsibilities include 1) educating the public on the importance of water and its proper use; 2) collecting, analyzing, and distributing water-related information to the general public and to the scientific, technical, educational, and water management communities; 3) serving local water needs by providing technical assistance; 4) cooperating with local agencies on water resources investigations; 5) supporting watershed and river restoration programs; 6) encouraging water conservation; 7) exploring conjunctive use of ground and surface water; 8) facilitating voluntary water transfers; and, 9) when needed, operating a state drought water bank.

The department's Office of Water Use Efficiency administers financial assistance in the form of loans and grants for implementation of cost-effective, efficient agricultural and urban water management or for programs that are not locally cost-effective but provide a statewide benefit.

Health and Safety Code Section 17921.3

Health and Safety Code Section 17021.3 requires low-flush toilets and urinals in all buildings, including commercial, residential, institutional and industrial buildings.

California Public Utility Commission

The California Public Utility Commission (CPUC) regulates privately owned electric, telecommunications, natural gas, water, and transportation companies, in addition to household goods movers and rail safety. The CPUC's Energy Division works in setting electric rates, protecting consumers, and promoting energy efficiency, electric system reliability, and utility financial integrity. The CPUC regulates natural gas local distribution facilities and services, natural gas procurement, intrastate pipelines, and intrastate production and gathering. It works to

provide opportunities for competition when in the interest of consumers, takes the lead in environmental review of natural gas-related projects, recognizes the growing interaction of electric and gas markets, and monitors gas energy efficiency and other public purpose programs.

California Code of Regulations, Title 24, Part 6, Energy Efficiency Standards

CCR, Title 24, Part 6, Energy Efficiency standards, promotes efficient energy use in new buildings constructed in California. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Title 24 is the State Building Code, and it is enforced through the local building permit process.

California Administrative Code, Title 20, Section 1604(f) (Appliance Efficiency Standards)

California Administrative Code, Title 20, Section 1604(f) establishes efficiency standards that give the maximum flow rate of all new showerheads and lavatory and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979, and known as ANSI A112.18.1M-1979.

California Administrative Code, Title 20, Section 1606(b) (Appliance Efficiency Standards)

California Administrative Code, Title 20, Section 1606(b) prohibits the sale of fixtures that do not comply with regulations. No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards.

Local

Los Angeles County General Plan

The existing Los Angeles County General Plan describes issues and provides goals and policies related to utilities provided for Los Angeles County residents. The following General Plan goals and policies for public services are relevant to the Project:

General Goals and Policies

Environmental Protection Goal and Policies

- Goal: Conservation of resources and environmental protection.
- Policy 12: Accept and plan for a level and rate of population and economic growth consistent with improved environmental quality and the availability of air, water and energy resources.
- Policy 17: Conserve energy to ensure adequate supplies for future use.
- Policy 18: Conserve the available supply of water and protect water quality.

Policy 19: Restore and protect air quality through the control of industrial and vehicular emissions, improved land use management, energy conservation and transportation planning.

Policy 26: Promote the development and use of new and improved water and waste management technology.

Economy and Employment Goal and Policy

Goal: A strong diversified economy and full employment.

Policy 43: Maintain a balance between increased intensity of development and the capacity of needed facilities such as transportation, water and sewage systems.

Land Use Element

Coordination with Public Services Goal and Policies

Goal: To provide for land use arrangements that take full advantage of existing public service and facility capacities.

Policy 1: Require that new developments in non-urban areas have adequate accessibility to paved roads and water lines of sufficient capacity.

Policy 2: Discourage the development of existing substandard parcels when it is determined that such development individually or in combination with adjacent existing and/or proposed development, will result in overburdening of existing and/or planned public services and facilities.

Sufficient Commercial and Industrial Lands Goal and Policy

Goal: To provide commercial and industrial lands sufficient to accommodate the projected labor force.

Policy 9: Protect major landfill and solid waste disposal sites from encroachment of incompatible uses.

Energy Conservation and Improved Air Quality Goal and Policy

Goal: To foster compatible land use arrangements that contribute to reduced energy consumption and improved air quality.

Policy 22: Promote land use arrangements that will maximize energy conservation.

Housing Element

Housing Affordability Goal and Policy

Goal: A housing supply that ranges broadly enough in price and rent to enable all households, regardless of income, to secure adequate, affordable housing.

Policy 15: Encourage the use of energy-saving technologies, on a cost-effective basis, in the design, construction, and operating systems of existing and new residential buildings to reduce utility costs to future residents.

Conservation, Open Space and Recreation Element

Energy Goal and Policies

- Goal: To conserve energy resources and develop alternative energy sources.
- Policy 2: Support the conservation of energy and encourage the development and utilization of new energy sources including geothermal, thermal waste, solar, wind and ocean-related sources.
- Policy 3: Promote the use of solar energy to the extent possible.

Water Goal and Policies

- Goal: To conserve water and protect water quality.
- Policy 4: Protect ground water recharge and watershed areas, conserve storm and reclaimed water, and promote water conservation programs.
- Policy 5: Encourage the maintenance, management and improvement of the quality of imported domestic water, ground water supplies, natural runoff and ocean water.

Public Facilities Element

Mitigation Goal and Policies

- Goal: Mitigation of hazards and elimination of adverse impacts in providing water and waste services.
- Policy 1: Program water and sewer services extensions to be consistent with General Plan policies and to mitigate situations that pose immediate health and safety hazards.
- Policy 2: Prohibit the degradation of air quality by requiring the mitigation of emissions from waste disposal sites.

Protection Goal and Policies

- Goal: To protect the health and safety and welfare of all residents in providing water and waste services.
- Policy 3: Encourage private firms and public agencies providing water and waste management services to cooperate with all levels of government in establishing, enacting and enforcing consistent standards and criteria.
- Policy 4: Cooperate with federal, state, regional, and local agencies to develop and implement new technologies in water and waste management while continuing existing methods until new alternatives are economically feasible.
- Policy 5: Explore user cooperation with federal and state agencies for use of public lands for waste disposal.
- Policy 6: Ensure the location, acquisition, and development of landfill sites which meet the environmental and siting criteria for hazardous liquid and solid wastes.
- Policy 7: Require an independent geologic study for all Class I disposal applications.

- Policy 8: Design water and waste management systems which enhance the appearance of the neighborhoods in which they are located and minimize negative environmental impacts.

Improvements to the Systems Goal and Policies

- Goal: Improved systems of resource use, recovery and reuse.
- Policy 9: Improve coordination among operating agencies of all water and waste management systems.
- Policy 10: Encourage compatible, multiple use of water and waste management facilities, including public recreational utilization, where consistent with their original purpose and the maintenance of water quality.
- Policy 11: Increase storage of potable water in underground aquifers through greater use of spreading grounds.
- Policy 12: Promote solid waste technology, including source reduction, to reduce dependence on sanitary landfills.
- Policy 13: Promote the advancement of technology to reduce the volume of liquid waste.
- Policy 14: Facilitate the recycling of wastes such as metal, glass, paper and textiles.
- Policy 15: Use technology for the conversion of waste to energy.
- Policy 16: Encourage development and application of water conservation, including recovery and reuse of storm and waste water.

Efficiency Goal and Policies

- Goal: Efficient water and waste management services.
- Policy 18: Protect the capacity of Class I landfills by restricting their acceptance of nonhazardous wastes.
- Policy 19: Accelerate the implementation of advanced technological methods for waste disposal, and expand the countywide capacity of sanitary landfills only as justified by need.
- Policy 20: Continue to recover off-site costs for capital improvements necessitated by development, including required additional plant capacity, as well as other water and waste management facilities.

Quality Water Goal and Policies

- Goal: A high quality of coastal, surface and ground waters.
- Policy 21: Protect public health and prevent pollution of ground water through the use of whatever alternative is necessary.
- Policy 22: Provide protection for ground water recharge areas to ensure water quality and quantity.
- Policy 23: Avoid or mitigate threats to pollution of the ocean, drainage ways, lakes and ground water reserves.

- Policy 24: Design flood control facilities to minimize alteration of natural stream channels.
- Policy 25: Design and construct new water and waste management facilities to maintain or protect existing riparian habitats.

Public Facilities Element

Managing Resources Goal and Policies

- Goal: Improve the coordination of economic activities in order to conserve limited resources and maximize their impact.
- Policy 24: Continue to seek improved solid waste disposal techniques which would alleviate the problems of land shortage and environmental pollution generated through the continued use of landfills.
- Policy 25: Vigorously support measures that will provide an adequate supply of high quality water for Southern California.

Antelope Valley Areawide General Plan

The Antelope Valley Areawide General Plan (adopted December 4, 1986) is a component of the Los Angeles County General Plan and contains policies used to guide land use and planning decisions in the Antelope Valley area. The following policies are applicable to the proposed project.

- Policy 101: Develop and use groundwater sources to their safe yield limits.
- Policy 102: Use imported water, when available, to relieve overdrafted groundwater basins and maintain their safe yield for domestic uses outside of urban areas.
- Policy 103: Encourage utilization of flood waters and reclaimed wastewater for groundwater recharge.

3.12.4 Impacts and Mitigation

Methodology

This assessment evaluates the potential for construction and operational activities under the proposed project to adversely affect utilities and service systems at the project site and in the surrounding area. Project plans were reviewed and compared with water, electrical and gas infrastructure. The analysis involved research and contacting utility service providers in order to determine impacts to water, wastewater energy and solid waste services.

Significance Criteria

The criteria used to determine the significance of water supply and infrastructure impacts are based on Appendix G of the *CEQA Guidelines*. For this analysis, the proposed project may result in significant impacts if it would:

- Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- Not have sufficient water supplies available to serve the project from existing entitlements and resources, and need new or expanded entitlements;
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill that does not have sufficient permitted capacity to accommodate the project's solid waste disposal needs; and
- Not comply with federal, state and local statutes and regulations related to solid waste.

Project Impacts

Impact 3.12.1: The project would not conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board (less than significant).

The proposed project would require the use of an on-site septic disposal system. Regulations proposed by the State Water Resources Control Board (SWRCB) provide guidance on determining the capacity of a leach system based on the percolation rate of soils (California Code of Regulations, Title 27, Division 2, Subdivision 1, Chapter 7). According to the proposed regulations, soils that exhibit a percolation rate of one inch per 50 minutes may apply a maximum of approximately 0.4 gallons per square foot of infiltration area per day. Applying this assumption to the 2.24-acre site⁷ that Leighton identified as suitable for use as a leach field, it would have a maximum capacity of over 30,000 gallons per day. This capacity could easily handle the anticipated daily generation of 4,350 gallons of wastewater by the new facility. Design of the proposed septic system would conform to both SWRCB and the County of Los Angeles regulations (County of Los Angeles, *Procedures for Application for Approval of Private Sewage Disposal System Construction*, 2000) regarding on-site septic disposal. As a result, it is anticipated that the proposed project would not conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board and there would be a less than significant impact.

Mitigation Measures: None required.

Impact 3.12.2: The proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (less than significant with mitigation incorporated).

⁷ The project site is approximately 3.0 acres. The leach field site is located within the project site boundaries.

The proposed project would require the use of an on-site septic disposal system and would not tie into the closest sewer system. Project proponent shall participate in such on-site and off-site water service improvements as may be required by the District to mitigate all impacts on current water system. Water mains shall be designed to meet or exceed the total flow requirements determined for domestic flow and fire flow for this development. Fire flow shall be determined by the Los Angeles County Fire Chief. State mandated water conservation measures including low-flow toilets, urinals, water conserving plumbing and other required conservation measures would be utilized in the new facility to reduce the amount of water needed. As stated earlier the proposed gymnasium/ community building is LEED certified which requires conservation of natural resources. Therefore, the proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. With implementation of UTL-1, project impacts would be less than significant.

Mitigation Measures:

UTL-1: Landscaped area shall be designed with drought tolerant species. Planting beds shall be heavily mulched in accordance with water-conserving landscape design practices.

Significance after Mitigation: Less than significant.

Impact 3.12.3: The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects (less than significant).

The proposed project would increase impervious surfaces at Stephen Sorensen County Park by up to approximately 41,000 sf⁸, or 0.94 acres (29% coverage of the site), which would increase runoff. The quantity of additional runoff would be minimal due to the small size of the proposed project site. The project is located in an area without a public stormdrain system. Projects rely on streets, roadside ditches, as well as various limited on-site improvements where necessary to avoid flooding. The project design includes on-site drainage improvements (including catchbasins and drains) to treat and carry the cleaned runoff to an on-site location where rip-rap will be utilized to slow the rate of discharge. The on-site drainage improvements will collect and transfer storm water to the north and west portions of the site. The design will be similar to the existing drain for the previously developed portion of the park. The proposed project would not require or result in the construction of any new off-site storm water drainage facilities, or result in the need for expansion of any off-site facilities, and a less than significant impact is anticipated.

Mitigation Measures: None required.

⁸ Email communication from Angela Perez, Carde-Ten, June 11, 2007.

Impact 3.12.4: The project would have sufficient water supplies available to serve the project from existing entitlements and resources, and would not need new or expanded entitlements (less than significant).

Potable water service at the park is provided by the Los Angeles County Waterworks District No. 40. District No. 40 water supply sources include groundwater and SWP water supplied by AVEK. The IUWMP estimates that AVEK would have approximately 119,300 acre-feet per year available to serve the Antelope Valley in the future. District No. 40 also operates two groundwater wells in the Lake Los Angeles area that supplies approximately 40 percent of the local demand. These wells are located within the Antelope Valley groundwater basin. The basin is estimated to have 68 million acre-feet of storage of which 20 million acre-feet is currently available. Using generation factors developed by the County of Los Angeles, the maximum proposed Gymnasium/Community Building size would be 14,500 square feet, which would require approximately 5,075 gallons of potable water per day or 5.7 acre-feet per year (City of Los Angeles, 2001).⁹ This usage accounts for less than 0.00005 percent AVEK's total future water supply and 0.000002 percent of the District's available groundwater supply.¹⁰ The proposed project water usage is therefore unsubstantial and would be incapable of significantly affecting existing water supplies including existing groundwater supplies. In addition, the proposed project would reduce water usage by installing only drought tolerant landscaping. The proposed project would not require new or expanded water supply resources or entitlements and would create a less than significant impact.

Mitigation Measures: None required.

Impact 3.12.5: The proposed project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (less than significant).

The project would provide on-site septic systems and would not utilize a wastewater treatment plant (see Impact 3.12.2 above). A less than significant impact would occur.

Mitigation Measures: None required.

Impact 3.12.6: The project would not be served by a landfill that does not have sufficient permitted capacity to accommodate the project's solid waste disposal needs (less than significant).

⁹ Potable water use for the proposed gymnasium is based on multiplying 14,500 square feet by the factor of 0.35 gallons per day per square foot, per the City of Los Angeles generation factors (City of Los Angeles, 2001). No local generation were found or made available, thus the City of Los Angeles water generation rates were used.

¹⁰ Percentages are determined by dividing 5.7 acre-feet of potable water per year by 119,300 acre-feet per year (AVEK supply) and 20 million acre-feet per year (ground water supply).

The California Environmental Protection Agency, Integrated Waste Management Board (IWMB) has developed solid waste generation factors for various land use types and these factors can be accessed from their website.¹¹ Although gymnasium sites were not specifically called out on the website, the closest land use type is “other services,” which includes recreational services. IWMB approximates that other services generate 3.12 pounds of solid waste per 100 square feet per day. The County has estimated the maximum proposed Gymnasium/Community Building size at 14,500 square feet. Therefore, it is anticipated that the proposed Gymnasium/Community Building could generate, at most, approximately 452.5 pounds of solid waste per day or 165,126 pounds of solid waste per year (based on a 365-day year).¹²

The proposed gymnasium/community building is a relatively small project and is not anticipated to generate large amounts of solid waste per day. Waste Management currently does not have the capability to calculate the amount of waste the proposed project would generate.¹³ However, the Lancaster and Antelope Valley landfills that would service the proposed have sufficient capacity to service the project site.

There would be no export of soil from the project site. The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs; however, the County’s Solid Waste Management Program requires each city under its jurisdiction and the unincorporated portions of the County to divert 50 percent of its solid waste from landfill disposal through source reduction, recycling and composting. Impacts would be less than significant.

Mitigation Measures: None required.

Impact 3.12.7: The proposed project would comply with federal, state and local statutes and regulations related to solid waste (less than significant).

The proposed project would comply with federal, state, and local statutes and regulations related to solid waste disposal, including recycling program requirements. Therefore, there would a less than significant impact.

Mitigation Measure: None required.

¹¹ Information accessed from the IWMB website at

<http://www.ciwmb.ca.gov/WasteChar/WasteGenRates/Service.htm> on February 13, 2007.

¹² Daily solid waste generation for the proposed gymnasium is based on dividing 14,500 square feet by 100 square feet and then multiplying this number by the factor 3.12 pounds of solid waste per day, per IWMB generation factors.

¹³ Personal Communication with Nicole Stetson of Waste Management, on September 27, 2007.

Cumulative Impacts

Impact 3.12.8: The proposed project could result in adverse cumulatively considerable impacts to water supply or infrastructure (less than significant).

Based on the Cumulative Projects List provided in Chapter 2.0 Project Description, there are no related projects within a five mile radius of the proposed project that are currently under construction, approved but not built, or proposed for development.¹⁴ Each potential future project would be subject to review by the County of Los Angeles Department of Public Works, Southern California Edison, Southern California Gas Company, and Waste Management. Preparation of an appropriate CEQA document would be required by the County if potentially significant impacts are anticipated (i.e., IS/MND/EIR). Any environmental documents for those projects must discuss project impacts, and individual project mitigation measures may be required to reduce environmental impacts to all applicable public utility services. Individual project conditions can also be applied to reduce impacts utilities. The proposed project is located in an area that is currently served by existing public utilities (i.e., water and energy utilities). Existing facilities can be readily extended into the area to serve the proposed project, and the proposed impact on these facilities would be minimal. The proposed project does not have an individually significant impact on utilities, and would not have a cumulatively considerable contribution to these services and facilities. Therefore, the proposed project, in conjunction with the list of related projects, would not have a significant cumulative impact on utilities in the area.

Mitigation Measures: None required.

¹⁴ Written communication from Michele Bush, Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

3.13 Effects Found not to be Significant

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this EIR. CEQA Guidelines Section 15128 requires that an EIR contain a brief statement disclosing the reasons why various possible significant effects of a proposed project were found not to be significant and, therefore, would not be discussed in detail within the EIR. The following impacts were deemed less than significant: agricultural resources, mineral resources, population and housing, and recreational resources. The basis for the non-significant conclusions is provided below with a discussion of each topic. Additionally, various topics within some of the chapters in Chapter 3.0 Environmental Setting, Impacts and Mitigation Measures were also eliminated. Please see Chapter 3.0 for details.

Agricultural Resources

The proposed would not result in the conversion of prime farmland, unique farmland or farmland of statewide importance to non-agricultural uses. Nor would implementation of the proposed conflict with existing zoning for agricultural uses or a Williamson Act contract, or involve other changes in the existing environment which could result in conversion of farmland to non-agricultural uses.

According to the Antelope Valley General Plan Land Use Policy Map (County of Los Angeles December 1986), the land use designations within the vicinity of the site, other U-1 and O areas are designated as well as Non-Urban 1 (N-1), Non-Urban 2 (U-2), and Commercial (C) areas. Please see Land Use and Planning, Section 3.8, for further details. The project site is largely vacant, with portions developed for park uses. “No active agriculture lands or Prime, Unique, or Statewide Importance agricultural soils are present on-site or within the project area,” according to the previous HUD-NEPA-Environmental Assessment.¹ In addition, the site is shown as “other land” (i.e., not farmland or prime soils) on the State Important Farmlands Map.² Therefore, the proposed project will have less than a significant impact on agricultural resources.

Mineral Resources

The proposed project would not result in the loss of a known mineral resource that would be of value to the region or the loss of a locally-important mineral resource recovery site. Mineral Resource Zones (MRZs) are areas identified by the State of California relative to their known or anticipated mineral resources. MRZs have classifications to determine their potential mineral resource significance.

The proposed project site is at a lower elevation than the adjacent developed portion of the park site. In order to properly complete the proposed project, fill would be brought in to raise the elevation of the Gymnasium/Community Building Project site to the same level as the adjacent

¹ HUD-NEPA-Environmental Assessment, Stephen Sorensen County Park, April 2005 pg.20.

² California Department of Conservation State Farmland Mapping, accessed on May 29, 2007, at http://ftp.consrv.ca.gov/pub/dlrr/fmmp/metadata/html/los_angeles_meta.htm

completed park improvements. Previous documentation for the site indicates that it is not located within a mineral resource zone. “The project site is not in an area of known mineral resources and no mineral resource extraction is occurring in the site vicinity. No impact to the availability of mineral resources is anticipated,” (pg. 23, HUD-NEPA-Environmental Assessment). The park project would not result in the loss of any locally or regionally known mineral. Therefore, the proposed park Gymnasium/Community Building will have no impact on mineral resources.

Population and Housing

The proposed project would not directly impact population growth in the surrounding community, nor does the project contain any residential or business components. A significant indirect increase in population or housing is not anticipated, as discussed in Chapter 4, Other CEQA Considerations, Section 4.5, Growth Inducing Impacts. The proposed project’s location would not displace housing or people. The project involves the expansion of the recreational facilities at the park. The project will be designed to provide additional recreational opportunities to the Lake Los Angeles community. The proposed project consists of a gymnasium with an attached community building that includes a multi-purpose room, staff offices, classroom, men’s and women’s restrooms, and kitchen along with a corresponding parking lot and site improvements. It is anticipated that the majority of the project’s patrons already reside within the project area. The proposed recreational facility will not directly or indirectly induce substantial population growth as a result of its implementation. Therefore, the proposed project would not displace existing housing or people, or necessitate the construction of replacement housing elsewhere. Thus, development of the proposed project would not require extending or improving infrastructure in a manner that would facilitate off-site growth. Therefore, the proposed project would have less than a significant impact on population and housing.

Recreational Resources

The proposed project is a neighborhood recreational improvement project and the continuing phase of an existing recreational area. The project will consist of a gymnasium and attached community building that will include a lobby and public counter area, ADA male and female restrooms, fixed tiered bleachers, a scoreboard, a multi-purpose room, classroom, kitchen, and custodian room. The project will also include constructing a new corresponding parking lot, site improvements including new walkways, landscaping and irrigation, security lighting and civic art, please see Transportation and Traffic Section 3.11 for details on parking. The proposed park project will provide additional recreational opportunities to the neighboring community. The project will be designed with the goal of providing children and adults with a venue for both passive and active recreation. The gymnasium can be considered a potentially beneficial addition to the community. The proposed project is in itself a recreational facility and therefore will not cause the physical deterioration of neighboring facilities to occur. The, proposed project will have no adverse effect on surrounding recreational facilities.

3.14 NEPA Environmental Assessment

3.14.1 Introduction

The National Environmental Policy Act (NEPA) requires consideration of physical and socio-economic impacts beyond those required by the California Environmental Quality Act (CEQA). The purpose of this Section is to address the additional NEPA requirements and to fulfill the additional environmental documentation required by the U.S. Department of Housing and Urban Development prior to its taking a federal action. This NEPA analysis is required to receive federal funding for a portion of the project. In addition, the CDC is involved in the project.

3.14.2 Impacts and Mitigation Measures

NEPA Environmental Assessment Checklist¹

The NEPA EA information was entered in accordance with the following guidelines [Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27] Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Impact Codes:

- (1) -No impact anticipated;
- (2) -Potentially beneficial;
- (3) -Potentially adverse;
- (4) -Requires mitigation; and
- (5) -Requires project modification.

¹ <http://www.hud.gov/offices/cpd/environment/review/nepachecklist.doc>, accessed on December 5, 2006.

IMPACT CATEGORY CODE SOURCE OR DOCUMENTATION

(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse;
(4) Requires Mitigation; And (5) Requires Project Modification.

Conformance with Comprehensive Plans and Zoning	1	The County of Los Angeles General Plan defers to the Antelope Valley Area Plan for land use designation of the site. According to the Antelope Valley General Plan Land Use Policy map, the land use designation for the Lake Los Angeles area within the vicinity of the site are U-1 and Open Space (O) designated areas, as well as Non-Urban 1 (N-1), Non-Urban 2 (N-2), and Commercial (C) areas. The C-designated areas are concentrated at the intersection of Avenue O and 170 th Street East. The project site area is designated Open Space in the Antelope Valley Areawide General Plan and zoned R-A-20000. ² The site is located within a rural residential area. The proposed project involves the construction of a gymnasium/ community building, site improvements, walkways, security lighting and an associated parking lot. The proposed development would be in conformance with the land use designation and zoning for the site.
Compatibility and Urban Impact	1	The project site is situated within the unincorporated Los Angeles County boundary. The proposed project site is located within a rural residential area. The project is zoned R-A-20000. ³ Surrounding the project are undeveloped land and single family residences. To the north and west of the site are single family homes. To the direct south is open and undeveloped land, access to the park is limited by the Lovejoy Butte. To the southeast, are single family residential homes that have access to the site via Avenue P. Directly to the east of the project site is the completed portion of Stephen Sorensen County Park. The project will be compatible with the existing facilities developed at the park and will provide the Lake Los Angeles area with a needed community building/gymnasium. The proposed recreational uses are compatible with the adjacent open lands and residences. The proposed project would provide additional recreational amenities for the community, and thus be compatible with the area.
Slope	1	The topography of the proposed project site is relatively flat; however, the project site is at a lower elevation than the adjacent developed portion of the park site. In order to properly complete the proposed project, approximately 7,000 cubic yards of over-excavation would be required, over which fill would be imported to increase the elevation of the Gymnasium/Community Building Project site to the same level as the adjacent completed park. Please see Figure 2-6, Site Grading Concept, located in the <i>Project Description</i> of the EIR. Approximately 14,300 cubic yards of fill earth would be imported to the site. If some portion of the excavated soil can be re-utilized, the import would be reduced by the amount of re-utilized soil, however, a worst-case import of 14,300 cubic yards has been assumed. The proposed project would not result in large-scale topographic changes or other changes that would affect the drainage pattern of the surrounding area. The proposed project would not substantially alter the existing drainage patterns through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site. Existing site drainage infrastructure will be extended to serve the project site. All drainage must comply with RWQCB, SWPPP and NPDES requirements.
Erosion	1	The potential for soil erosion on the proposed project site is generally lower than adjacent areas due to its generally level topography, but soils within the project vicinity have a moderate erosion potential (NRCS, 1969). Construction activity associated with site development may result in temporary wind- and water-driven erosion of soils. This impact would be reduced by the implementation of best management practices (BMPs) (e.g., sandbag barriers, straw bale barriers, sediment traps, and street sweeping) during construction. Existing site drainage infrastructure would be extended to serve the project site. All drainage must comply with RWQCB, SWPPP and NPDES requirements. After construction, the site would be covered with hardscape and landscaping that would reduce any potential erosion impact. Therefore, the proposed project would not result in substantial soil erosion or the loss of topsoil and no adverse impact is anticipated.

² Information based on Los Angeles County, Department of Regional Planning GIS-NET, accessed on March 28, 2007 at http://regionalgis.co.la.ca.us/imf/sites/GISNET_pub/jsp/launch.jsp.

³ Information based on Los Angeles County, Department of Regional Planning GIS-NET, accessed on March 28, 2007 at http://regionalgis.co.la.ca.us/imf/sites/GISNET_pub/jsp/launch.jsp.

IMPACT CATEGORY CODE SOURCE OR DOCUMENTATION

(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse;
(4) Requires Mitigation; And (5) Requires Project Modification.

Soil Suitability	4	<p>There is no evidence of soil suitability problems on the project site. The shrink-swell potential is a reflection of the ability of some soils with high clay content to change in volume with a change in moisture content. This characteristic poses a significant hazard to sites that undergo seasonal variation in soil moisture content, such as hillsides or flatlands with a seasonally fluctuating water table. The site's soils are aridosols which is a desert soil type that is typically well-drained, low in clay content, and low in inorganic material. Based on the soil type present, the project site generally has a low potential for expansion (NRCS, 1969) and, therefore, the project would not be located on expansive soil.</p> <p>The potential for seismic-related ground failure, including liquefaction, is considered low with incorporation of mitigation and, therefore, the proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death and a less than significant impact with mitigation is anticipated.</p> <p>Mitigation Measures:</p> <p>GEO-1: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. Site specific geotechnical investigations and or recommendations shall be prepared for the approved gymnasium and other associated facilities. Prior to final building approvals, geotechnical engineering recommendations regarding mitigation and reduction of seismic hazards for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i>⁴ The purpose of these guidelines is to protect the public safety from seismic effects.</p> <p>GEO-2: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. The project applicant shall prepare a site specific, design level geotechnical investigation for the approved project to determine the particular project designs and provide site specific engineering recommendations for mitigation of liquefiable soils. Liquefiable soils under the conditions described in the geotechnical report shall be mitigated according to the requirements of the Seismic Hazards Mapping Act. Prior to incorporation into the project, geotechnical engineering recommendations regarding the mitigation and reduction of liquefaction for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i>⁵ The purpose of these guidelines is to protect the public safety from seismic effects such as liquefaction.</p> <p>GEO-3: The earthwork and site preparation of the project site, prior to placement of project improvements including foundations, shall include the mitigation of expansive soils in accordance with Section 1805.8 of the 2007 California Building Code (or equivalent within a superseding version if applicable). The recommendations for mitigation of expansive soils shall be made by a California licensed geotechnical engineer or engineering geologist and the approved project will comply with said report.</p>
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⁴ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

⁵ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

IMPACT CATEGORY CODE SOURCE OR DOCUMENTATION

(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse;
(4) Requires Mitigation; And (5) Requires Project Modification.

Hazards and Nuisances including Site Safety	1	There is no evidence of hazards or nuisances present on the project site. Portions of the site have been previously developed and there is no indication on-site or in historical records of potential or previous contamination. The site is not on the Department of Toxic Substances Control's Hazardous Waste and Substances Site List. Therefore, no hazards relating to soil or groundwater contamination are expected on-site. An Environmental Data Resources (EDR) Radius Map search was performed for the site. The EDR search identified no portion of the site is located in any of the hazardous waste site databases searched. The proposed park enlargement would not involve the use of large quantities of hazardous materials and is not subject to airport or wildfire safety hazards.
Energy Consumption	1	The proposed gymnasium/ community building with park improvements and associated parking would increase the consumption of electricity in the area. The approximately 14,500 square-foot gymnasium and attached community building would integrate sustainable green design features. The County of Los Angeles is planning on meeting the United States Green Building Council's Silver standard under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. ⁶ The resulting facility would include security lighting, lighted walkways, a lighted gymnasium/ community building and a lighted parking lot. Even with LEED certification, the project would increase long-term electricity consumption; however, these resources are available both locally in the Lake Los Angeles Area, and regionally. The proposed project is relatively small and its electrical uses represent an incremental increase compared to regional demand.
Noise - Contribution to Community Noise Levels	4	<p>The proposed project is a gymnasium/ community building with a parking lot and associated uses. Project operations are not expected to exceed the County General Plan Noise Element compatibility criterion of 55 dBA CNEL for the property line of sensitive land uses. It takes a doubling of traffic volumes to increase the noise levels by 3 dBA. Given the relatively small size of the project (three acres on which a 14,500 sf gymnasium / community building is proposed), and the fact that project activities would occur largely within the proposed project building, noise levels are anticipated to be nominal. Incrementally increased traffic at the park would occur due to the project; however this is not anticipated to double traffic on existing streets which currently carry area traffic (residential and commercial) as well as exiting park traffic.</p> <p>Mitigation Measures:</p> <p>NOI-1: Construction Operation Hours and Noticing. Project construction will be limited to between the hours of 7:00 a.m. and 4:00 p.m. (which is reduced from the normally allowable Los Angeles County construction hours of 7:00 a.m. and 7:00 p.m.). Signs shall be posted on-site informing neighbors of the duration and hours of the construction activities.</p> <p>NOI-2: Construction Equipment Maintenance. All on-site construction equipment shall be inspected weekly by the contractor to ensure that they have properly operating mufflers and that are in good operating condition.</p> <p>NOI-3: Construction Staging Areas. All construction staging areas will be as far away as is practical from the nearest homes. Construction staging will occur adjacent to the area of grading in the proposed parking lot area, which is no closer than 250 feet from the nearest sensitive noise receptors. The staging for construction of the Gymnasium/Community Building will occur on the proposed parking lot area of the site. Staging for the parking lot will occur on other open areas of the park.</p>
Air Quality Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels	4	<p>Air Quality Management Plan</p> <p>The proposed project would not conflict with or obstruct implementation of the applicable Air Quality Attainment Plan. The project is located within the Antelope Valley Air Basin (Basin). Air emissions in the Basin are regulated by the Antelope Valley Air Quality Management District. The AVAQMD is required, pursuant to the Clean Air Act of 1988, to reduce emissions of criteria pollutants for which the</p>

⁶ Information based on: <https://www.usgbc.org/Docs/LEEDdocs/3.4xLEEDRatingSystemJune01.pdf> ; accessed on May 29, 2007.

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	<p>Basin is in non-attainment. Strategies to achieve these emission reductions are developed in the AQMP prepared by AVAQMD for the region. The AQMP is based on SCAG population projections as well as land use designations and population projections included in General Plans for those communities located within the Basin. Population growth is typically associated with the construction of residential units or large employment centers. A project would be inconsistent with the AQMP if it results in population and/or employment growth that exceeds growth estimates for the area.</p> <p>The proposed project would not result in population growth and would not cause an increase in currently established population projections. The proposed project does not include residential development or large local or regional employment centers, and thus would not result in significant population or employment growth. The proposed project is intended to expand the existing park facilities. As such, the proposed project would not conflict with or obstruct implementation of the applicable AQMP. No impact would occur and no further study related to compliance with applicable air quality plans is required.</p> <p>Construction Air Quality</p> <p>Construction-related emissions would be short-term, but may still cause adverse effects on air quality. Project construction activities would include site preparation, earthmoving, and general construction. Site preparation includes activities such as general land clearing and grubbing. Earthmoving activities include cut-and-fill operations, trenching, soil compaction, and grading. General construction includes adding improvements such as roadway surfaces, structures, and facilities. The emissions generated from these construction activities include:</p> <ul style="list-style-type: none"> • Dust (including PM10 and PM2.5) primarily from fugitive sources (i.e., emissions released through means other than through a stack or tailpipe) such as soil disturbance; • Combustion emissions of criteria air pollutants (ROG, NOx, carbon monoxide, carbon dioxide, PM10, and PM2.5) primarily from operation of heavy off-road construction equipment (primarily diesel-operated), portable auxiliary equipment, and construction worker automobile trips (primarily gasoline-operated); and • Evaporative emissions (ROG) from asphalt paving and architectural coatings. <p>Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM10 concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts. It is mandatory for all construction projects in the Basin to comply with AVAQMD Rule 403 for fugitive dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the proposed project site, and maintaining effective cover over exposed areas.</p> <p>NOx, ROG, PM10, PM2.5, CO, and CO₂ construction emissions were estimated for a worst-case day based on default maximum crew, truck trip, and equipment. Emissions are based on criteria pollutant emission factors from URBEMIS 2007 (version 9.2.4). Construction activities are proposed to begin in 2010 and end in 2011, resulting in construction duration of approximately 15 months. Construction would include the import of soil. Conservatively, 18,000 cubic yards of import soil was assumed for the analysis. The results of this analysis are summarized in Section 3.2 Air Quality, Table 3.2-6 of the Draft EIR.</p>
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	<p>Toxic Air Containments</p> <p>Some population groups, such as children and the elderly, are considered more sensitive to air pollution than others. The nearest residential structures are over 250 feet from the nearest property line. Lands that surround Stephen Sorensen County Park are developed with single-family residences to the south, commercial uses further to the east along 170th Street East, and single family residences and open space to the west and north. The CARB has defined DPM as a TAC. According to AVAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.</p> <p>Diesel fuel is a relatively small percentage of the fuel use during operations of a park project, but diesel fuel is the main fuel for most construction equipment. However, given the construction schedule of 15 months, the proposed project would not result in a long-term (i.e., 70-years) substantial source of TAC emissions and long-term project-related toxic emission impacts during construction would not be significant. In addition, air pollutants from daily park operations would be minimal since there are no major emissions sources operating or planned for operation on-site. Emissions from construction and park operations would not result in a significant impact to a sensitive receptor and impacts are considered less than significant.</p> <p>Mitigation Measures: Added to further reduce impacts from project construction.</p> <p>AIR 1a: Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications.</p> <p>AIR 1b: Applicant shall ensure that contractors maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions.</p> <p>AIR 1c: Wheel washers shall be installed where vehicles exit the construction site onto paved roads.</p> <p>AIR 1d: Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.</p> <p>Operational Air Quality</p> <p>Operational emissions for the proposed project would be generated primarily from on-road vehicular traffic, area sources (such as landscaping equipment), and indirectly by the energy consumption of the park. Because power is provided over an integrated electricity grid, indirect emissions from the use of electricity could occur at any of the fossil-fueled power plants in California or neighboring states, or from hydroelectric or nuclear plants or renewable energy sources. For all power plants, it can be assumed that the emissions are reviewed as part of the permitting process before the power plant is built or expanded.</p> <p>Operational emissions for mobile and area sources are based on criteria pollutant emission factors from URBEMIS 2007. As shown in Section 3.2 Air Quality, Table 3.2-7 of the Draft EIR, no emissions would be greater than the significance criteria. Thus, operation-related emissions would be less than significant without mitigation.</p> <p>Greenhouse Gas Emissions</p> <p>The project would not be classified as a major source of greenhouse gas emissions (actually operational emissions would be about 4 percent of the lower reporting limit, which is 25,000 metric tons of CO₂E/yr). When compared to the overall state reduction goal of approximately 174 million metric tons CO₂E/yr, the maximum greenhouse gas emissions for the project (1,035 metric tons CO₂E/yr or 0.0006 percent of the state goal) are quite small and would not conflict with the state's ability to meet the AB 32 goals. When compared to 1990 statewide</p>
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		<p>emissions of 427 million metric tons CO₂E/yr, the project emissions are also quite small. The project's estimated construction-related greenhouse gas emissions would be only 0.00005 percent of the total estimated state annual estimated greenhouse gas emissions, and the project's estimated operational-related greenhouse gas emissions would be only 0.0002 percent of the total estimated state emissions. Combined construction plus operational emissions would be only 0.0003 percent of statewide emissions; however construction and operational emissions probably would not occur at the same time. The project's greenhouse gas emissions would not be significant, based on the thresholds cited above, for the construction or operational emissions, or for the combined construction and operation emissions of greenhouse gasses (224 metric tons of CO₂E/yr during construction □ 1,035 metric tons of CO₂E/yr for operations □ 1,259 metric tons of CO₂E/yr combined). The project would not conflict with any of the recommended actions in the AB 32 Scoping Plan and the project falls below the 25,000 metric ton mandatory reporting significance threshold and below most limits suggested by other agencies. Finally, the project location will allow for short travel distances for recreation and the building would likely incorporate LEED sustainable green design features, which would reduce long-term energy demand, lowering the project's carbon footprint. □ Thus, the project would not conflict with the goals of AB 32.</p> <p>Mitigation Measures:</p> <p>None required. Project features would likely include LEED Certification and the proposed project would be in compliance with the Countywide Energy and Environmental Policy.</p>
<p>Environmental Design</p> <p>Visual Quality - Coherence, Diversity, Compatible Use and Scale.</p>	4	<p>The proposed project involves construction of a Gymnasium/Community Building in the existing Stephen Sorensen County Park, by developing a gymnasium/ community building, landscaping and irrigation, walkways and an associated parking lot on adjacent but undeveloped land. Lands surrounding the park are largely vacant to the north and west, with single-family residential subdivisions to the east and south. While there are no designated scenic vistas within the park, the project would modify public views in the vicinity. As viewed from the surrounding area, the project would result in a change from the natural rocky landscape to a suburban park (irrigated landscaping and park buildings). The closest scenic corridor is Avenue O. The scenic portion of Avenue O begins at 165th Street East and continues to 240th Street.⁷ Avenue O is located to the north of the project site past the existing residential developments. The scenic area of the corridor is approximately 0.75 miles north of the project site at the closest point. The project site is not currently visible from the scenic corridor, as there are intervening natural and suburban features between the site the scenic portion of the roadway. The natural intervening features are vacant undeveloped land including the buttes to the north of the project site (an extension of Lovejoy Buttes, the larger portion of which lie south of the project site). Suburban features include existing residential homes, streets, and landscaping.. The gymnasium / community building would be one story, with a high ceiling, for a total of approximately 37 feet in height from final grade. Based on topography available from the United States Geologic Survey (USGS)⁸, the project would not be highly visible the scenic corridor. The project site is not likely to be seen from this vantage point since it is blocked by the exiting topography and exiting homes to the north; thus, there would be no significant impact to a scenic corridor.</p> <p>The project would block views of some of the existing rocky hillside and butte topography as seen from the urbanized area to the south; however, no designated scenic vista would be affected. The proposed project has been designed to be compatible with the surrounding developments and the project would not substantially alter the visual character of the surrounding neighborhoods or nearby homes. The project's plant material will be compatible with the existing park development, buffer areas, and the visual character of the surrounding neighborhood. The construction of the park enlargement would not</p>

⁷ Personal Communication with Los Angeles Department of Regional Planning, Bill Cross, May 30, 2007.

⁸ Accessed November 20, 2007, on the following web site: <http://www.topozone.com>

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		<p>result in significant light or glare impacts. Security lighting along walkways and in the parking lot would be engineered to focus downward to avoid light spillover onto adjacent properties. The proposed project is expected to be compatible with the existing park improvements and with the visual quality of the surrounding area.</p> <p>The new Gymnasium/Community Building facilities would provide security lighting for walkways, parking and the gymnasium/community building. The new lighting would be consistent in height, design and illumination with existing lighting within the park (existing sports field lighting on the soccer and baseball fields, parking lot lighting and safety lighting around restrooms). To assure that lighting impacts are reduced to a less-than-significant level, a mitigation measure has been included, below. Some additional incremental glare from cars exiting the site along the existing driveway on Avenue P would project southward towards the adjacent residential area. However, homes on the nearest lots are more than 250 feet from the source of the lighting- see Chapter 2, Figure 2-5, Surrounding Land Use, above), and would not be substantially impacted at that distance. In addition, the park buildings are to be closed by 10:00 p.m. Monday through Friday and 10:00 p.m. on Saturday and Sunday (except for infrequent special events, when they may be open later), limiting ambient nighttime lighting and vehicular glare impacts to the community. Special events may occur up to approximately ten times a year. To assure a less than significant glare impact, two mitigation measures have been included, below. In addition, as the County is planning on obtaining a LEED certified building; the proposed Gymnasium/Community Building would be energy efficient and utilize lighting only where deemed necessary for visibility and safety.</p> <p>Mitigation Measures:</p> <p>AES-1: Lighting. All on-site lighting shall be designed to cast light downward, in the immediate vicinity of the light post or bollard. Lighting shall be placed and designed to avoid light spillage beyond the limits of the park.</p> <p>AES-2: Glare. To reduce any potential glare from project headlights to a less-than-significant level, all new parking lot areas adjacent to Avenue P shall include a block wall at a height that exceeds the level of vehicle headlights.</p>
Historic, Cultural and Archaeological Resources	4	<p>Previous work identified a sparse surface scatter of prehistoric cultural material within the project area. However, previously unidentified and intact cultural deposits were identified <i>under</i> Avenue P during construction monitoring for previous park improvements. Therefore, in order to ensure compliance with all applicable requirements, potential project effects are proposed to be mitigated by having an archaeologist and a Native American monitor on site during any subsurface construction activity, and conducting mandatory cultural resource training for all project personnel involved in subsurface excavations.</p> <p>Mitigation Measures:</p> <p>CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction activity that has the potential to impact cultural deposits. If trenching, grading, or other ground-disturbing activities takes place in more than one location at the same time, separate archeological and Native American monitors shall be present with each operator of earth-moving equipment. The monitors' objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.</p> <p>CUL-2: Construction Orientation. Prior to initiation of the project grading and</p>

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		<p>construction program, the project archaeologist shall provide a mandatory cultural resource orientation to all construction personnel working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.</p> <p>CUL-3: Exposure of Previously Unidentified Paleontological Resources: In the event that paleontological resources are discovered, the project proponent (depending upon the project component) will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in <i>CEQA Guidelines</i> Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to the project proponent for review and approval prior to implementation.</p> <p>CUL-4: Exposure of Previously Unidentified Human Remains. In concert with Measures CUL-1 and CUL-2, mitigation for exposure of previously unidentified human remains is as follows - if human remains are found, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the county Coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American who will then serve as consultant on how to proceed with the remains (e.g. avoidance, reburial).</p>
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Demographic Character Changes	2	The Gymnasium/Community Building of Sorensen County Park would create expanded recreational opportunities for local residents. The proposed project does not contain a residential component and would not be expected to increase population or change the demographic character of the community.
Displacement	1	The Stephen Sorensen County Park site currently contains previously completed improvements along with undeveloped park land. The proposed project would be located on a portion of the currently undeveloped park land. Therefore, no displacement would occur.
Employment and Income Patterns	2	The project would generate short-term employment opportunities during construction activities and a minimal increase in potential long-term employment opportunities for maintenance of the expanded park. No adverse impacts to employment or income are expected.

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Educational Facilities	1	The proposed project does not contain a residential component and would not increase population. The proposed project would not bring a new source of children to the surrounding local schools as a result of its implementation. The proposed park project would provide new recreational opportunities for the existing residents in the community.
Commercial Facilities	1	The proposed project would not affect commercial facilities.
Health Care	1	The proposed project would not affect access to health care services.
Social Services	2	The proposed project would provide community recreation and meeting facilities for current area residents. The park enlargement gives the community more recreational opportunities in the general area. No new services would be required as a result of the project.
Solid Waste	1	<p>The proposed project would not require new solid waste facilities. Construction debris would be recycled or transported to the nearest landfill site and disposed of appropriately. In addition, the project would only generate solid waste during operation of the new park facilities.</p> <p>The closest landfill facility to the site is the Antelope Valley Recycling Center, which is Class III (non-hazardous) facility located 20.7 miles from the project site. The facility includes two landfills with a combined current capacity of 1,800 tons per day, of which 400 to 500 tons per day are currently unutilized.</p> <p>The next closest landfill to the site is the Lancaster Landfill and Recycling Center, which is 25.7 miles away and also handles Class III wastes, specifically including agricultural waste, tires, construction/demolition, contaminated soil, green waste, and biosolids as well as industrial, inert, and mixed municipal waste for this portion of Los Angeles County.⁹ The landfill can accept as much as 1,700 tons of solid waste per day, of which 200 to 300 tons per day are currently unutilized.</p> <p>No soil would be exported as a result of the proposed project. The proposed Gymnasium/ Community Building project is a relatively small project and is not anticipated to generate large amounts of solid waste per day. Waste Management currently does not have the capability to calculate the amount of waste the proposed project would generate.¹⁰ However, the Lancaster and Antelope Valley landfills that would service the proposed have sufficient capacity to service the project site. Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.</p>
Waste Water	1	The proposed project would slightly increase wastewater generation as compared to current conditions. The proposed project would require the use of a septic system with a leach field as the community of Lake Los Angeles is entirely on septic and or localized treatment systems. Leighton Associates (Leighton, 2005) has performed a geotechnical survey of the entire Stephen Sorensen County Park property and has tested for percolation rates at several locations believed to offer suitable geologic conditions for the placement of a leach field gallery (Leighton, 2005). The suitable area exhibits a minimum percolation rate of approximately one inch per 50 minutes (Leighton, 2005). Based on this percolation rate and regulations proposed by the State Water Resource Control Board (SWRCB), the suitable area could provide a maximum disposal capacity of approximately 30,000 gallons per day. ¹¹ The proposed project is well

⁹ Information accessed from the IWMB website at
<http://www.ciwmb.ca.gov/swis/Detail.asp?PG=DET&SITESCH=19-AA-0050&OUT=HTML> on
February 13, 2007.

¹⁰ Personal Communication with Nicole Stetson of Waste Management, on September 27, 2007.

¹¹ Maximum disposal capacity was determined by applying the assumption, according to the proposed regulation, that soils exhibiting percolation one inch per 50 minutes may apply a maximum of approximately 0.4 gallons per square

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		below the maximum disposal capacity of 30,000 gallons per day for the suitable area. However, actual accommodation rates for the suitable area would need to be verified by a civil engineer, depending on the development type and septic design. The civil engineer would also design the septic system to accommodate the independently-verified wastewater generation rates. The County would also need to apply for and obtain approval of the proposed septic system design by the Los Angeles County, Department of Health Services, Environmental Health Division prior to project implementation.
		The proposed project would disturb more than one acre of soil, and therefore a Statewide General Construction National Pollutant Discharge Elimination System (NPDES) Permit is required along with submittal of a notice of intent to the State Regional Water Quality Control Board (SRWCB) prior to commencement of construction activities. A project subject to compliance with the applicable Standard Urban Storm Water Mitigation Plan (SUSMP), and development of Storm Water Pollution Prevention Plan (SWPPP) for the site will be required prior to construction. Construction of the proposed project would result in a small net increase in the amount of impermeable surfaces over the 100-acre site. Runoff from the proposed building would drain into the existing stormwater drainage system. With the implementation of a SWPPP and water quality BMPs, the proposed project would not provide substantial sources of polluted runoff during construction or daily operation. Therefore, the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
Storm Water	1	During project operation, a stormdrain system will include catchbasins and drains to treat and carry the cleaned runoff to an on-site location where rip-rap will be utilized to slow the rate of discharge. All water discharge must comply with County NPDES and SUSMP requirements so as to avoid a significant impact. In order to comply, the project would incorporate appropriate operational features into the project stormdrain design, prior to obtaining municipal approval for the project urban storm water runoff mitigation plan. This shall occur prior to the issuing of building and grading permits.
Water Supply	4	Potable water service at the park is provided by the Los Angeles County Waterworks District No. 40. District No. 40 water supply sources include groundwater and imported water supplied by the Antelope Valley Eastern Kern Water Agency (AVEK). District No. 40 also operates two groundwater wells in the Lake Los Angeles area that supplies approximately 40 percent of the local demand. AVEK can supply in excess of approximately 1.26 million gallons of water per day (mgd); ¹² this number does not include local well water, which would increase the daily water supply beyond the aforementioned number. Using 1.26 million gallons of water per day, and based on generation factors developed by the County of Los Angeles, the maximum proposed Gymnasium/Community Building size would be 14,500 square feet, which would require approximately 5,075 gallons of potable water per day (City of Los Angeles, 2001). ¹³ This usage accounts for less than 0.004 percent of the total water demand supplied by AVEK

foot of infiltration per day. Applying this assumption to the 2.24-acre area provides for a maximum capacity of over 30,000 gallons per day.

¹² According to the AVEK website at <http://www.avek.org/history.html>, when State Water Project facilities are finally completely built, the contract between the Department of Water Resources and AVEK will allow the water agency to take its annual maximum entitlement of 141,400 acre feet of imported water.

¹³ Potable water use for the proposed gymnasium is based on multiplying 14,500 square feet by the factor of 0.35 gallons per day per square foot, per the City of Los Angeles generation factors (City of Los Angeles, 2001).

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		(local well water not included) once State Water Project facilities are completely built. ¹⁴ Therefore, the proposed project would not require new or expanded water supply resources or entitlements. However, the proposed project will be required to implement ULT-1 to ensure a less than significant operational impact. Mitigation Measures: UTL-1: Landscaped area shall be designed with drought tolerant species. Planting beds shall be heavily mulched in accordance with water-conserving landscape design practices.
Public Safety • Police	1	The project park site is served by two law enforcement agencies, the Los Angeles County Sheriff's Department, Lancaster station and the
		Los Angeles County Police, Office of Public Safety (OPS) ¹⁵ . The Lancaster station is located at 501 W. Lancaster Boulevard in Lancaster. The Lancaster station has 189 sworn personnel and services the communities of Lake Los Angeles, the Antelope Acres, Quartz Hill and Lancaster. ¹⁶ The Los Angeles County Police is a specialized law enforcement agency that provides services to patrons, employees and properties of County Departments who contract out for such services. The Parks Service Bureau of the Los Angeles County Police OPS provides vehicle, bicycle and foot patrols at more than 126 regional parks, lakes, and nature trails. Currently, the department provides law enforcement services to Stephen Sorensen County Park. The proposed project may incrementally increase demand for police protection services; however, this increase is considered nominal. The proposed project is not anticipated to have adverse effects on police protection services.
Public Safety • Fire	1	The proposed project site would be serviced by the Los Angeles County Fire Department, Battalion 17 Fire Station □114. Fire Station □114 is located on 39939 N 170 th Street East. The Fire Department currently has access to the project site via Avenue P and is located approximately .05 miles from the project site. The proposed project will comply with all aspect of the County building code including fire safety requirements. The proposed project is a project within the existing park and will not necessitate substantial additional services from the Fire Department, particularly considering code-compliant design of the new facilities. The proposed project may incrementally increase demand for fire protection services; however, this increase is considered nominal.
Public Safety - Emergency Medical	1	The Los Angeles County Fire Department would provide emergency medical services. Emergency victims would be taken to the Antelope Valley Hospital located at 1600 West Avenue J in Lancaster, approximately 20 miles away from the site, which serves the Lake Los Angeles Community. Emergency victims would also be treated by firefighters arriving on the scene and by paramedics in transport to the hospital.
Open Space and Recreation • Open Space • Recreation	2	The Lake Los Angeles Area is currently lacking in community recreational facilities. The proposed project would provide needed recreational improvements and opportunities to the area. The project will consist of a gymnasium and attached community building that will include a lobby and public counter area, Americans With Disabilities Act (ADA) men's and women's restrooms, fixed tiered bleachers, a scoreboard, a multi-purpose room, classroom, kitchen, and custodian room. The project would also

¹⁴ Percentage of total water demand is determined by dividing 5,074 gallons of potable water per day by 1.26 million gallons of water.

¹⁵ Information for the Los Angeles County Police website accessed at <http://ops.co.la.ca.us/>, on November 29, 2007.

¹⁶ Information from the Los Angeles County Sheriff's Department website www.lasd.org/stations/for1/landcaster/index.html, accessed on December 11, 2006.

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		include constructing a new parking lot, site improvements including new walkways, landscaping and irrigation, security lighting and civic art. The proposed project is designed with the goal of providing children and adults with a venue for both passive and active recreation.
• Cultural Facilities	4	Please see Historic, Cultural and Archaeological Resources for details.
Transportation	1	<p>The project daily vehicle trip generation is minimal and does not require a traffic impact analysis since the project would generate less than the 500□ daily trip threshold at which the County of Los Angeles normally requires a traffic study. In addition, the area road system is in place and is adequate to accommodate project generated traffic. The existing park is located near the northwest corner of Avenue P and 170th Street East. Access to the proposed park is provided by two driveways on Avenue P, on the south side of the park. The most westerly driveway is the closest to the proposed Gymnasium/Community Building Project site. Local access to the project site is provided from Avenue P and 170th Street. Regional access to the project site from the south and east is provided by</p> <p>State Route 138 (SR-138), which is approximately six miles south of the site. It is an east-west trending highway that turns northward and merges with SR-14 (Antelope Valley Freeway) to the west. Palmdale Boulevard is an east-west trending primary road that connects with SR-14 to the west and terminates at 240th Street East to the east, approximately six miles from the intersection Palmdale Boulevard and 170th Street East. Additionally, Avenue Q (an east-west trending secondary road) provides local access to 170th Street East. Current parking spaces (for the existing, previously developed land uses in the park) are located to the south and southeast of the proposed project site. There are currently 94 parking spaces provided on-site. The proposed gymnasium will have an adjacent parking lot containing an additional of 57 parking spaces, for a total of 151 parking spaces provided on-site. The proposed project complies with County Regional Planning parking requirements, as calculated by the project architects (all parking requirements are subject to final plot plan approval by the Los Angeles County Department of Regional Planning and the Los Angeles County Department of Building and Safety). The proposed park facility would not create any hazardous traffic conditions, affect air traffic patterns, or conflict with any policies pertaining to alternate transportation. Therefore, the proposed project would have no adverse effect.</p>

NATURAL FEATURES

SOURCE OR DOCUMENTATION

(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse;
(4) Requires Mitigation; And (5) Requires Project Modification.

Water Resources	1	<p>The property has a natural drainage course that was historically part of the Lovejoy Springs water system. The drainage course runs across the northern portion of the property, and a small tributary to the drainage course crosses the western portion of the site. The topography of the proposed project site is relatively flat; however, the proposed project site is at a lower elevation than that of the adjacent developed portions of the site. In order to properly complete the proposed project, fill would be brought in to raise the elevation of the Gymnasium/Community Building Project site to the same level as the adjacent park land. In order to achieve this; approximately 14,300 cubic yards of fill earth would be imported to the site. The proposed project would not result in large-scale topographic changes or other changes that would affect the drainage pattern of the site and surrounding area or impact water resources.</p>
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NATURAL FEATURES	SOURCE OR DOCUMENTATION
(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse; (4) Requires Mitigation; And (5) Requires Project Modification.	
Surface Water	1 The drainage course to the north of the development area and the small tributary to the drainage course located to the west of the proposed project would be associated with surface water flows during seasonal rains. The topography of the proposed project site is relatively flat; however, the project site is at a lower elevation than the adjacent developed portion of the park. In order to properly complete the proposed project, fill would be brought in to increase the elevation of the Gymnasium/Community Building Project site to the same level as the adjacent completed. Areas of surface water flow in the drainage course would be avoided.
Unique Natural Features and Agricultural Lands	1 No active agriculture lands or Prime, Unique, or Statewide Importance agricultural soils are present on-site or within the project area. No portion of the site is zoned for agricultural use or under the Williamson Act contract.
Vegetation and Wildlife	4 The following mitigation measures would reduce the project's potentially significant biological resources impact to a less-than-significant level. Mitigation Measures: BIO □ 1: Terrestrial Animals. Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction. BIO-2: Burrowing Owl. No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present. If any burrowing owls are identified, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31 for owls), including a minimum 250-foot non-disturbance buffer zone around any occupied burrow. The size of non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels. If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County shall implement a burrowing owl passive relocation program that shall adhere the CBOC guidelines regarding burrowing owls. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that: Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one

NATURAL FEATURES	SOURCE OR DOCUMENTATION
	<p>(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse; (4) Requires Mitigation; And (5) Requires Project Modification.</p> <p>week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.</p> <p>BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 1:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (<i>Spermophilus mohavensis</i>). The agreed upon 1:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.</p> <p>Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 1:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to Clokey's cryptantha, if present.</p> <p>BIO-4: Southern Grasshopper Mouse. Preconstruction surveys for the southern grasshopper mouse shall occur prior to ground disturbing activities. Five consecutive nighttime trapping surveys shall be conducted by a qualified biologist. If southern grasshopper mice are trapped, they shall be relocated to a nearby location containing suitable habitat. Trapping techniques and methodology, and release locations shall be coordinated with the CDFG prior to initiating surveys. A completion letter shall be prepared and submitted to the County and the CDFG within 30 days following the completion of trapping surveys.</p> <p>BIO-5: Nesting Resident and/or Migratory Birds including Raptors. Within 30 days of any project ground disturbing or vegetation removal actions during the nesting season (February 1 through August 31), the County shall have a qualified biologist conduct a pre-construction nesting bird and survey. The biologist shall be qualified to determine the status and stage of nesting efforts by resident and/or migratory birds including locally breeding raptor species without causing intrusive disturbance. This survey should cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.</p> <p>If an active nesting effort is confirmed or considered likely by the biologist, the nest site shall be avoided and a non-disturbance buffer zone established by the biologist and approved by the County in consultation with the CDFG. The nest site avoidance and non-disturbance buffer zone shall be maintained until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist. If nest avoidance is not feasible, then the County shall obtain the necessary permits or authorizations from the USFWS and/or CDFG to impact the nesting effort that could require taking the young nestlings to a qualified wildlife rehabilitation center.</p>

NATURAL FEATURES		SOURCE OR DOCUMENTATION
(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse; (4) Requires Mitigation; And (5) Requires Project Modification.		
Long Term Effects		
Growth-Inducing Impacts	1	The proposed project would provide the Lake Los Angeles Community with additional local recreational opportunities. It is anticipated that the majority of the patrons already reside in the area, thus the project is not anticipated to significantly increase the population.
Mineral Resources	1	The project site is not in an area of known mineral resources. The proposed project site is at a lower elevation than the adjacent developed portion of the park site. Fill will be imported in to raise the elevation of the site to the level of the adjacent developed park. Previous documentation for the site indicates that it is not located within a mineral resource zone.

OTHER FACTORS		SOURCE OR DOCUMENTATION
(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse; (4) Requires Mitigation; And (5) Requires Project Modification.		
Flood Disaster Protection Act [Flood Insurance] [§ 58.6(a)]	1	According to the Federal Emergency Management Agency Flood Insurance Rate Map 065043-0300-B (1980), the proposed project site is located outside the 100-year floodplain (Lovejoy Springs, which is dry except as a result of heavy winter storms and flash flooding events). The proposed project would not place any residential structure within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.
Coastal Zone Plan	1	The project site is not located in a coastal zone.
Airport Runway Clear Zone or Clear Zone Disclosure [§ 58.6(d)]	1	The project is not located within two miles of a public or public use airport, nor is it located in the vicinity of a private airstrip.
Historic Properties	1	Please see Historic, Cultural and Archaeological Resources above for details.
Wetlands Protection	1	The proposed project site is not located within an area that possesses the proper vegetation (i.e., a preponderance of hydrophytes or "water-loving" plants), soils (i.e., hydric or waterlogged soils), or hydrologic conditions (i.e., inundated either permanently or periodically or saturated during the growing season of the prevalent vegetation) to be defined a wetland according to the U.S. Army Corps of Engineers (USACE) <i>Wetlands Delineation Manual</i> (USACE, 1987). Therefore, the proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means and there would be no impact.
Sole Source Aquifers	1	No impact to primary drinking water sources is anticipated.
Endangered Species	4	Please see "Vegetation and Wildlife," for further details. All mitigation measure previously stated under this topic above still stand.
Wild and Scenic Rivers	1	No wild or scenic rivers are located within the site vicinity.

OTHER FACTORS**SOURCE OR DOCUMENTATION**

(1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse;
(4) Requires Mitigation; And (5) Requires Project Modification.

Air Quality Protection	4	Please see Air Quality above.
Farmland Protection	1	No active agriculture lands or Prime, Unique, or Statewide Importance agricultural soils are present on-site or within the project area. No portion of the site is zoned for agricultural use or under the Williamson Act contract.
Environmental Justice	1	The project would provide additional employment in the community during construction and would also offer limited job opportunity for the maintenance and operation of the park. The proposed project would provide a community meeting area and additional needed recreational opportunities to the Lake Los Angeles Community. The project would not expose low-income or minority populations to any environmental justice concerns.

CHAPTER 4

Other CEQA Considerations

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this Draft EIR. The other CEQA considerations include environmental effects that were found not to be significant, growth-inducing impacts or significant and unavoidable adverse impacts.

4.1 Less Than Significant Impacts

The following impacts areas were deemed less than significant and not applicable to the proposed project.

- Agriculture Resources;
- Mineral Resources;
- Population and Housing; and
- Recreation.

The following additional areas of impact were deemed less than significant, based upon further analysis in this EIR:

- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Public Services; and
- Transportation and Traffic.

4.2 Adverse Impacts That Can Be Mitigated to Less than Significant

The following impacts could be significant, but mitigation measures are available that would reduce the potential impacts to a less than significant level (see Chapter 3 Environmental Setting, Impacts and Mitigation Measures):

- | | |
|-------------------------|--------------|
| • Air Quality; | • Geology; |
| • Aesthetics; | • Noise; and |
| • Biological Resources; | • Utilities. |
| • Cultural Resources; | |

4.3 Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires a discussion of any significant impacts that cannot be reduced to levels of insignificance. The proposed project would not result in any significant and unavoidable impacts.

4.4 Significant Irreversible Environmental Changes

The proposed project would result in some limited irreversible environmental changes. The project would require the commitment of natural resources such as lumber, steel and concrete to construct the building. The resources needed are reasonably available in quantities able to satisfy regional demands, of which the project would be a small part. The project would not have a significant adverse impact on natural resources.

4.5 Growth Inducing Impacts

Pursuant to Section 15126.2(d) of the *CEQA Guidelines*, an EIR must address whether a project will directly or indirectly foster growth. Section 15126.2(d) reads as follows:

“[An EIR shall] discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in population may further tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

As discussed below, this analysis evaluates whether the proposed project would directly or indirectly induce economic, population, or housing growth in the surrounding environment.

Direct Growth Inducing Impacts in the Surrounding Environment

Although the proposed project calls for the expansion of recreational facilities in the Lake Los Angeles area, the proposed project would not significantly induce growth in the surrounding area. A project would directly induce growth if it would remove barriers to population growth such as a change to a jurisdiction’s general plan and zoning ordinance, or extensions of utilities or roadways well beyond existing development limits, which facilitates new growth. The construction of the proposed project is consistent with County of Los Angeles General Plan Land Use Element and the Zoning Ordinance. The project would provide additional recreational opportunities to the residents in the surrounding area.

Indirect Growth-Inducing Impacts in the Surrounding Environment

A project would indirectly induce growth if it would increase the capacity of infrastructure or facilities in an area in which the public service currently meets demand. The proposed project would not require significant increases in utility infrastructure, nor require the construction of new facilities beyond that which would be necessary to serve the proposed project. The proposed project would not significantly induce indirect growth in the surrounding area.

CHAPTER 5

Alternatives

5.1 Introduction and Overview

CEQA and the *CEQA Guidelines* (Section 15126.6) dictate that an EIR must describe a reasonable range of alternatives to a proposed project that could feasibly attain most of the basic project objectives, and would avoid or substantially lessen any of the proposed project's significant effects. Additionally, a "No Project" alternative must be analyzed. An EIR must evaluate the comparative merits of the alternatives.

The range of alternatives in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasonable choice. An EIR need not consider every conceivable alternative to a project. Rather, the alternatives must be limited to ones that meet the basic project objectives (though some objectives may be compromised with an alternative), are feasible, and would avoid or substantially lessen at least one of the significant environmental effects of the project. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

The EIR must briefly describe the rationale for selection and rejection of alternatives and the information the lead agency relied on when making the selection. It also should identify any alternatives considered, but rejected, as infeasible by the lead agency during the scoping process and briefly explain the reasons for the exclusion. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects.

This chapter identifies a No Project Alternative, as required under CEQA. One additional alternative, a Revised Site Plan Alternative, is evaluated. This alternative would attain some of the project objectives, are feasible, and could avoid or lessen environmental impacts. This chapter concludes by analyzing the environmentally superior alternative.

5.2 Project Objectives

As discussed in Chapter 2, Project Description, the Stephen Sorensen Gymnasium/Community Building park improvements objectives relevant to this EIR and the proposed development include the following:

1. Expand an existing park and fully meet ADA requirements for buildings, including restroom facilities, walkways, and a parking lot;
2. Provide a quality, up-to-date recreational facility that meets the growing demands of the community;
3. Respond to the need for expanded and enhanced community recreational amenities; and
4. Maintain and enhance open space and recreational opportunities within the County of Los Angeles.
5. Enhance Los Angeles County's prestige as a center of cultural and refinement;
6. Integrate mutually compatible uses within a the community; and
7. Create a visually unified project that would complement the natural setting of the project area.

5.3 Factors Considered in the Selection of Alternatives

CEQA requires that an EIR describe a range of reasonable alternatives to the proposed project or to the location of the proposed project, which could feasibly avoid or substantially lessen any significant environmental impacts while substantially attaining the basic objectives of the proposed project (*CEQA Guidelines* Section 15126.6). An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives to the proposed project considered, identifies alternatives eliminated from further consideration, and analyzes available alternatives in comparison to the potential environmental impacts associated with the proposed project.

Key provisions of the *CEQA Guidelines* (Section 15126.6) pertaining to the alternatives analysis are summarized below. Thus, the alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- The range of alternatives required in an EIR is governed by a “rule of reason;” therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. Alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the proposed project;
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the proposed project need to be considered for inclusion in the EIR;
- The extent to which the alternative would accomplish most of the basic objectives of the project;
- The feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, general plan consistency, and consistency with other applicable plans and regulatory limitations;
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative;

- The appropriateness of the alternative in contributing to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- The requirement of the *CEQA Guidelines* to consider a No Project Alternative; and to identify an “environmentally superior” alternative in addition to the No Project Alternative (*CEQA Guidelines* Section 15126.6(e)).

CEQA requires the range of feasible alternatives to be selected and discussed in a manner to foster meaningful public participation and informed decision-making. The factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. Alternatives are ultimately compared to the goals of the project and of the County.

5.4 Selection of Alternatives

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible and which are infeasible, therefore providing merit to in-depth consideration for those selected for additional analysis. After consideration of various alternatives, the following were selected for evaluation: the No Project Alternative, and Revised Site Plan Alternative. These alternatives were selected for their potential to reduce project impacts, particularly significant project impacts. It is noted that all project impacts are reduced to less than significant with mitigation (with the exception of cumulative green house gases); therefore, the proposed alternatives were selected in order to further reduce these impacts.

As noted earlier, the purpose of alternatives is to explore ways to avoid or substantially lessen any of the significant effects of the proposed project. As demonstrated in Chapter 3, all impacts of the proposed project are less than significant or less than significant with mitigation (with the exception of cumulative green house gases). The following is a list of significant impacts requiring mitigation measures. The alternatives are expected to reduce these already less than significant impact, and may require fewer or reduced mitigation measures:

Significant Project Impacts Reduced to Less than Significant with Mitigation

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology;
- Noise; and
- Utilities.

Significant Project Impacts that Cannot be Mitigated

- None.

5.5 Alternatives Eliminated from Further Consideration

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are clearly infeasible. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (*CEQA Guidelines*, Section 15126.6(f)(3)). This section identifies alternatives considered by the lead agency, but rejected as infeasible, and provides a brief explanation of the reasons for their exclusion. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects (*CEQA Guidelines*, Section 15126.6(c)).

Alternative Site

The approximately 3.0-acre project site is located on a 100 -acre County Park in unincorporated Los Angeles County. The proposed Gymnasium/Community Building park improvements would be located at 16801 East Avenue P, in the unincorporated community of Lake Los Angeles, in northern Los Angeles County, California, approximately 15 miles east of the City of Palmdale. An alternative site for the project need not be considered when its implementation is “remote and speculative” such as the site being out of the purview of the lead agency or beyond the control of a project applicant. For this project, there are no suitable alternative sites in the Lake Los Angeles area within the control of the project applicant (LACDPW). The proposed project is more useful and functional as part of an existing park with other amenities. By providing various park uses in close proximity the public is better served as users can come to one location for several purposes. Given the nature of the proposed project in adding amenities to an existing park, and considering the project objectives, locating the proposed project on another site would be impractical and infeasible. In addition, it would be difficult to still proceed within a reasonably similar time frame for project completion.

Alternative Land Use

The project site is designated Open Space and zoned R-A-20000, and surrounding properties are zoned R-3-20U and C-2 to the east, R-3-20U to the south, R-A-20000 within the park to the west and R-A-20000 beyond the park to the west, and R-A-20000 within the park to the north and R-3-20U, RPD-20000-3U, and C-2 beyond the park to the north. Land use designations for the Lake Los Angeles area within the vicinity of the site are U-1 and Open Space (O) designated areas, as well as Non-Urban 1 (N-1), Non-Urban 2 (N-2), and Commercial (C) areas. The park site lies to the east of Significant Ecological Area (SEA) No. 53 (Lovejoy Butte), according to the currently adopted Los Angeles County General Plan SEA Maps (see Section 3.3 Biological Resources and Section 3.8 Land Use discussion). As the proposed project is an expansion of park facilities with associated uses, the consideration of non-public uses, such as residential or commercial, were not

considered applicable or feasible. Other types of uses, such as residential, would increase traffic trip lengths or other environmental impacts could occur that would not occur with the proposed project, such as school impacts. An alternative land use was not explored further, as it would fail to meet most of the project objectives, would be inconsistent with the existing zoning and land use designation, and would have additional impacts than those of the proposed project.

5.6 Alternatives Analysis

For each of the project alternatives identified, a general description of the alternative is presented and a qualitative discussion of its comparative environmental impacts is provided. As provided in Section 15126.6(d) of the *CEQA Guidelines*, the significant effects of each alternative are identified in less detail than the proposed project. A summary comparison of impacts of the alternatives and the proposed project is included in **Table 5-1** below.

**TABLE 5-1
ALTERNATIVES SUMMARY COMPARISON OF IMPACTS**

Issue Area	Proposed Project	No Project Alternative	Revised Site Plan Alternative
Aesthetics	LTSWM	Decreased	Comparable Impact
Air Quality	LTSWM	Decreased	Comparable Impact
Biological Resources	LTSWM	Decreased	Increased Impact
Cultural Resources	LTSWM	Decreased	Increased Impact
Geology	LTSWM	Decreased	Increased Impact
Hazards/Hazardous	LTS	Decreased	Comparable Impact
Hydrology and Water Quality	LTS	Decreased	Increased Impact
Land Uses and Planning	LTS	Decreased	Comparable Impact
Noise	LTSWM	Decreased	Comparable Impact
Public Services	LTS	Decreased	Comparable Impact
Transportation	LTS	Decreased	Comparable Impact
Utilities	LTSWM	Decreased	Comparable Impact

Key: LTS □ less than significant; LTSWM □ less than significant with mitigation incorporated.

Alternative 1: No Project Alternative

The *CEQA Guidelines* (Section 15126.6(e)(3)(B)) provides the following guidance on the No Project Alternative, “If the project is...a development project on identifiable property, the no project alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved.”

Environmental Impacts

Aesthetics: Under the No Project Alternative, the site would remain in its present condition. No changes would be made to the existing aesthetic character of the site. While the proposed project would not result in significant aesthetic impacts, the alternative would result in no changes to views. Overall, project impacts would be reduced.

Air Quality: Under the No Project Alternative, the project site would remain the same. As a result, there would be no construction-related emissions (from construction activities, vehicles and equipment), and no operational emissions (associated with increased traffic) with the proposed project. With no additional traffic volumes, air emissions in the vicinity would remain unchanged. No impact to air quality would occur as a result of this alternative; impacts would be reduced.

Biological Resources: The No Project Alternative would not result in a change to present biological resources at the project site. Under this alternative, the project site and natural landscape would remain unchanged, and nothing would be removed or altered. Additional site grading would not occur. No impact to biological resources would occur, eliminating the project's impacts and eliminating the need for project mitigation measures.

Cultural Resources: Under the No Project Alternative, buildings and structures would remain unchanged. This alternative would not involve grading activities that could unearth cultural resources. Under this alternative, there would be no changes to the site and thus no impact to cultural resources would occur, eliminating all potential project impacts and eliminating the need for project mitigation measures.

Geology: Under the No Project Alternative, no grading would occur at the project site. The site would continue to be exposed to existing geological risks; however, because the site would remain unaltered under this alternative, no additional people or property would be exposed to potential geology risk. The No Project Alternative would result in a less than significant impact related to the exposure of people and structures to geologic hazards. Impacts would be eliminated, along with the need for mitigation measures.

Hazards and Hazardous Materials: Under the No Project Alternative, the site would remain in its present condition. The proposed project is anticipated to introduce only small quantities of hazardous materials on both a short-term basis (i.e., during construction) and in the long-term (for the life of the project). However, the proposed project's potential hazardous materials impacts would be less than significant. Under the No Project Alternative, site operations would continue to result in the application of paints and solvents, which are hazardous materials. However, the No Project Alternative would not introduce any new sources of hazardous materials to the project site and, therefore, is considered to have reduced hazardous materials impacts as compared to the proposed project.

Hydrology and Water Quality: Under the No Project Alternative, existing storm water runoff drainage patterns and volumes would remain unchanged. No potential impacts to water quality,

such as new point and non-point source discharges, resulting from construction activities or subsequent operations would occur. No alternative-related impacts would be decreased.

Land Use and Planning: The No Project Alternative would not result in a change to the existing condition. Because no change to the existing land use or land use plans and policies related to the project site would occur, this alternative would have no impact on land use at the site or in the vicinity. Impacts would be reduced.

Noise: The No Project Alternative would not result in any change to existing ambient noise levels and would introduce no new source of noise. Because no additional construction or recreational related operations would occur, and because traffic related to the project site would remain the same, traffic-related noise attributable to the project site would also remain unchanged. This alternative would result in no impact related to noise at or in the vicinity of the project site. All project impacts would be eliminated.

Transportation/Traffic: Under the No Project Alternative, the project-related increase in vehicle trips on the surrounding roadway network from proposed project construction and operation would not occur. The increased trips due to the proposed project operations would not occur; however longer trips would occur for those seeking gymnasium and community building needs elsewhere. Therefore, the No Project Alternative would have a reduced impact in terms of the trips going to and from the park, but would have an increased impact in terms of vehicle miles traveled (VMT). Overall, impacts are conservatively considered reduced.

Utilities: The No Project Alternative would have reduced utility demands. Specifically, it would place no demand on electricity, electrical facilities, water supplies, water or wastewater treatment facilities, or solid waste facilities. As a result, the No Project Alternative would result in reduced impacts.

Reasoning for Rejection of the No Project Alternative

The No Project Alternative would not meet any of the project objectives. The No Project Alternative would not provide the County with expanded recreational facilities and amenities. The project site would remain limited by its existing uses, and would not allow for any growth to meet the park's recreational goals, as expressed in the project objectives. In general, the No Project Alternative would result in fewer impacts on the environment than the proposed project; however, this alternative would not meet any of the goals and objectives of the proposed project and would provide none of the amenities of the proposed project.

Alternative 2: Revised Site Plan Alternative

Alternative 2 would provide an alternative site plan. This Alternative was chosen based upon the 2006 Planning Study conducted for the entire 100-acre park site. The purpose of the Planning Study was to identify potential land use constraints and determine the most suitable land for development. The Planning Study was intended to assist the County of Los Angeles, Department of Public Works staff with the future planning at the site. The analysis assessed the following

resources: biological resources, cultural resources, geologic hazards, hazardous materials, hydrology, land use, the local transportation network, and utilities (including septic leach field capacity). This Planning Study assessed the feasibility, constraints, and opportunities for the future full development of Stephen Sorensen County Park that would encompass the entire 100-acre site. Based on the results of the study, it was determined that the majority of the 100-acre site contained high constraints for development (i.e. was within the 100 year flood plane, had significant cultural resources, etc...). Thus, the most suitable undeveloped portion of the 100-acre park is the proposed 3.0 acre site.

Alternative 2 would provide an alternative site plan for the park site. The same project site and improvements would be proposed; however, the angle of the Gymnasium/Community Building would be rotated 90 degrees. This alternative requires significantly more grading, has a larger overall footprint of disturbance, but provides for a lower profile when viewed from Avenue P and from the nearby residences to the south of the park. It would also encroach into the 100-year flood plain, requiring that the foundation be raised above the 100-year flood level. The proposed project provides for adequate distance above the 100-year flood level, also, but the proposed Gymnasium/Community Building would sit at the same grade as the hardscape (walkways and parking lots) surrounding it.

Environmental Impacts

Aesthetics: As with the proposed project, the Revised Site Plan Alternative would enhance the land use pattern on the project site, contributing to additional recreational opportunities in the area. The visual impact from Avenue P would be reduced, although Avenue P is not a designated scenic highway or view corridor. Although visual impacts could be potential reduced, the same mitigation measures would need to be implemented regarding nighttime illumination and glare. Impacts from Avenue O would be similar and less than significant. Overall impacts would be similar in significance level to the proposed project.

Air Quality: The Revised Site Plan Alternative would result in the same construction emissions and operational emissions. Visitor car trips to the site would remain the same as those of the proposed project. Parking demand associated with this alternative would also be the same. This alternative is likely to have the same air quality impacts as the proposed project. The mitigation measures provided for the proposed project would also apply to the alternative.

Biological Resources: As with the proposed project, the Revised Site Plan Alternative would result in a slightly larger area of general disturbance as with the proposed project. Both the proposed project and the alternative would require mitigation, however, impacts from the alternative are anticipated to be larger than the proposed project given the dimensions and location of the building.

Cultural Resources: The Revised Site Plan Alternative would still result in grading and clearance of the project site to accommodate construction of the gymnasium/community building and associated uses. However, the area of the proposed grading would be significantly larger than the proposed project. The configuration of the lots and building would be smaller but would still

be located in the general vicinity as the proposed project. Thus, the Revised Site Plan Alternative would have the same potential impacts as the proposed project and would require the same mitigation measures.

Geology: The Revised Site Plan Alternative would result in the same geologic hazards as identified for the proposed project. The geological formation, seismic, and soils conditions potentially affecting development under the Revised Site Plan Alternative would be essentially the same as for the proposed project. The project site is not within an Alquist-Priolo Earthquake Fault zone. Therefore, the potential for a surface rupture is not great. This alternative requires significantly more grading, has a larger overall footprint of disturbance than the proposed project given the building orientation. All other geological related impacts would be the roughly the same, a significantly larger area of disturbance would occur. This alternative would have similar, potential impacts as the proposed project and would require the same mitigation measures.

Hazards and Hazardous Materials: Under the Revised Site Plan Alternative, the project would still introduce small quantities of hazardous materials on both a short-term basis (i.e., during construction) and in the long-term. However, both the proposed project's and alternative's impacts would be mitigated to levels considered less than significant. Therefore, the Revised Site Plan Alternative is considered to have the same hazardous materials impacts as compared to the proposed project.

Hydrology and Water Quality: As with the proposed project, the Revised Site Plan Alternative would still result in slightly larger impervious surface area at the project site (i.e. parking lots, building pad, and sidewalks). This alternative requires significantly more grading, has a larger overall footprint of disturbance than the proposed project given the building orientation. The alternative would encroach into the 100-year flood plain, an increased impact as compared to the project; however this impact would be mitigated with a raised foundation. After mitigation, impacts would be similar to the proposed project's impact.

Land Use and Planning: The Revised Site Plan Alternative would not conflict with the objectives of the General Plan. The alternative would add the same uses as the proposed project and would be consistent with the significance criterion of preserving the character and scale of the area. Both the proposed project and the Revised Site Plan Alternative are consistent with both the zoning and Areawide General Plan designations. The alternative would have the same less than significant impact with regard to the land use. Overall, impacts would be the same as compared to the proposed project.

Noise: The Revised Site Plan Alternative would result in the same construction noise therefore having a similar impact to the project. As with the project, the alternative would require mitigation for construction, and would assure no significant impact to area residences (nearest residence is 250 feet away). Less than significant operational noise impacts would occur due to traffic associated with the proposed project. Impacts would be similar as compared to the project.

Transportation/Traffic: The Revised Site Plan Alternative would result in the same amount of trips as the project site, and therefore the same traffic impact. Trip length and parking spaces would also be the same. Impacts would not vary from the proposed project's impacts.

Utilities and Service Systems: As with the proposed project, the Revised Site Plan Alternative would result in the use of utilities and service systems, and demand would be the same given that the structure is the same size. Impacts would be to the same as with the proposed project.

Reasoning for Rejection of the Revised Site Plan Alternative

The Revised Site Plan Alternative would meet all of the basic project objectives. The alternative would result in a larger area of site disturbance, more grading, and the foundation would need to be raised above the 100-year flood level, resulting additional engineering and construction costs than the proposed project. Furthermore, this alternative would result in additional impacts to biological and cultural resources. In general, it is considered less environmentally impacting to avoid a 100-year flood zone than to encroach upon it and mitigate with a raised foundation. The proposed project would avoid the flood zone and have a reduced cost over the alternative.

Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative. In addition, the *CEQA Guidelines* (Section 15126.6(e)(2)) require that, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Project Alternative would result in the least environmental impacts. Next to the No Project Alternative, and the Proposed Project would have the least impacts to the environment. After the No Project Alternative and the Proposed Project, the Revised Site Plan Alternative is the alternative that would have the least impacts, and therefore is the environmentally superior alternative; however its impacts are virtually the same as the proposed project's. Given the constraints provided in the previous planning analysis for the entire Stephen Sorensen County Park (Appendix B of this EIR), improved alternatives for the proposed project site and site plan are not available. A summary comparison of the potential impacts associated with the alternatives and the proposed project is provided in Table 5-1 above. The proposed project was selected over the alternatives as the proposed project would avoid additional impacts to biological resources, cultural resources, and it would avoid the flood zone. Additionally, the proposed project would have a reduced cost as compared to the alternative.

CHAPTER 6

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References

The following references, in alphabetical order, have been utilized in the analysis above:

California Department of Conservation State Farmland Mapping, accessed on May 29, 2007, at
http://ftp.consrv.ca.gov/pub/dlrp/fmmp/metadata/html/los_angeles_meta.htm.

CEQA Guidelines, California Code of Regulations (CCR), Title 14, Chapter 3, §15378, 2007.

CEQA Statute, Public Resources Code (PRC) Division 13, Chapter 1, §21000 et al., 2007.

HUD-NEPA-Environmental Assessment, Stephen Sorensen County Park, April 2005.

Loma Alta County Park in Altadena architectural plans, Loma Alta County Park, Altadena
California, Carde Ten Architects, October, 2004.

Los Angeles County, Department of Regional Planning GIS-NET, accessed on March 28, 2007 at
http://regionalgis.co.la.ca.us/imf/sites/GISNET_pub/jsp/launch.jsp.

Planning Study, Stephen Sorensen Park, 2005, ESA for LACDPW (see Appendix B of this Initial
Study).

Southern California Association of Governments website at
http://www.scag.ca.gov/wptf/pps/wptf120904_DeanEfsthathiou.ppt#277,2,Slide2.

Aesthetics

Bush, Michele. Principal Regional Planning Assistant, Los Angeles County Department of Regional Planning on July 1, 2008.

California Department of Transportation, California Scenic Highway Mapping System, updated 12-07-2007. Accessed on line June 2008 at:
http://www.dot.ca.gov/hq/LandArch/scenic_highways/.

County of Los Angeles, County of Los Angeles General Plan, 1993.

C`ross, Bill. Los Angeles Department of Regional Planning, Long Range Planning Division, May 30, 2007.

Air Quality

Antelope Valley Air Quality Management District (AVAQMD), *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, May 2005.

Antelope Valley Air Quality Management District (AVAQMD), *Rule 403 Fugitive Dust*, February 1997.

Association of Environmental Professionals (AEP), 2007. *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*.

Association of Environmental Professionals (AEP), 2007. *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*.

California Air Pollution Control Officers Association (CAPCOA), 2008. *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*.

California Air Resources Board (CARB), 2000. *Risk Reduction Plan for Diesel-Fueled Engines and Vehicles*, September 2000.

California Air Resources Board (CARB), 2001. *ARB Fact Sheet: Air Pollution Sources, Effects and Control*, <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>. Updated December 2005.

California Air Resources Board (CARB), 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

California Air Resources Board (CARB), 2008a. *Summaries of Air Quality Data*, 2005, 2006, 2007; <http://www.arb.ca.gov/adam/cgi-bin/db2www/polltrends/d2w/start>.

California Air Resources Board (CARB), 2008b. *Ambient Air Quality Standards*, available at <http://www.arb.ca.gov/aqs/aaqs2.pdf>.

California Air Resources Board (CARB), 2008c. *Area Designation Maps*, available at <http://www.arb.ca.gov/desig/adm/adm.htm>.

- California Air Resources Board, August 29, 2007c. *Mandatory Reporting of California greenhouse gas Emissions*, Presentation at Cal/EPA Headquarters.
- California Air Resources Board, December 6, 2007. *Mandatory Reporting of California greenhouse gas Emissions*, Presentation in El Monte, California.
- California Air Resources Board, June 2008a. *Climate Change Draft Scoping Plan, a framework for change*.
- California Air Resources Board, October 2007b. *Expanded List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration*.
- California Air Resources Board, October 2008b. *Climate Change Draft Scoping Plan, a framework for change*.
- California Air Resources Board, October 2008c. *Preliminary Draft Staff Proposal on Recommended Approaches for setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*.
- California Air Resources Board, September 2007a. *Draft List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration*.
- California Climate Action Registry, April 2008. *California Climate Action Registry General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0*.
- County of Los Angeles, Internal Services Department, approved January 16, 2007. Countywide Energy and Environmental Policy.
- Governors Office of Planning and Research, June 19, 2008. *Technical Advisory, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*.

Biological Resources

- BioSystems Analysis, Inc. (BioSystems), 1994. Life on the Edge. BioSystems Books, Bureau of Land Management (BLM), 2005. Final Environmental Impact Statement for the West Mojave Plan, A Habitat Conservation Plan and California Desert Conservation Area Plan Amendment, Volume 1A.
- Bureau of Land Management (BLM), *Final Environmental Impact Report and Statement for the West Mojave Plan, A Habitat Conservation Plan and California Desert Conservation Area Plan Amendment, Volume 1A, 2005*.
- Bureau of Land Management (BLM), *Record of Decision West Mojave Plan Amendment to the California Desert Conservation Area Plan, March 2006*.
http://www.blm.gov/ca/pdfs/cdd_pdfs/wemo_pdfs/wemo_rod_3-06.pdf.
- California Burrowing Owl Consortium (CBOC), 1993.
- California Department of Fish and Game (CDFG), 2006. *California Natural Diversity Database (CNDDDB)*. Wildlife Habitat Data Analysis Branch, Habitat Conservation Division, CDFG, Sacramento, CA.

- Environmental Science Associates (ESA), 2006. *Stephen Sorensen County Park Planning Study*. prepared for the Los Angeles County Department of Public Works.
- Herwick, Mark Supervising Regional Planner, Los Angeles County Department of Regional Planning, General Plan Section, December 2008.
- Los Angeles County, Countywide General Plan (1993)
<http://ceres.ca.gov/docs/data/0700/791/HYPEROCR/hyperocr.html>.
- Skinner, M.W. and B.M. Pavlik (eds.), 1986. *California's Native Plant Society's Inventory of Rare and Endangered Plants of California*. California native Plant Society, Sacramento, CA.
- U.S. Army Corps of Engineers (USACE), 1987. *Wetlands Delineation Manual*. Water Research Program Technical Report Y-87-1.
- U.S. Fish and Wildlife Service (USFWS), 1992. Field survey protocol for any non-federal action that may occur within the range of the desert tortoise. Unpublished document.

Cultural Resources

- Love, Bruce, 1993, The Archaeology of Lovejoy Buttes, Antelope Valley, Western Mojave Desert. Paper presented at the 27th Annual Meeting of the Society for California Archaeology.
- Nelson, Andrew, 1990, *Osteological Report on Human Skeletal Material Recovered from 4-LAN-192, Lovejoy Buttes, Lake Los Angeles, Antelope Valley*. Submitted to Pyramid Archaeology.
- Padon, Beth, and Bruce Love, 2004, *Phase I Archaeological Review of Site CA-LAN-192 at Stephen Sorensen Community Park, Los Angeles County, California*. Discovery Works, Inc., Long Beach California. Submitted to Los Angeles County Department of Public Works, Alhambra, California.
- Price, Barry A., Jay B. Lloyd, Sandra S. Flint, Mary Clark Baloian, Michael Mirro, Randy Baloian, David Earle, and Alan Garfinkel, 2005, *Final Eligibility and Effects Assessment at CA-LAN-192, Stephen Sorensen Park, Los Angeles County, California*. Applied EarthWorks, Inc., Fresno, California. Prepared for Rincon Consultants, Inc., Ventura, California. Submitted to Community Development Commission of the County of Los Angeles, Monterey Park, California.
- Toney, James T., 1968, *Archaeological Salvage of Site 4-LAN-192, Los Angeles County, California*. *UCLA Archaeological Survey, Project No. 300, April 30, 1968*. University of California, Los Angeles Archaeological Survey, Westwood, California.

Geology

- County of Los Angeles Department of Regional Planning, *Antelope Valley Areawide General Plan: A component of the Los Angeles County General Plan*, Adopted December 4, 1986. Accessed online at http://planning.co.la.ca.us/doc/plan/drp_pd_antelopevalley.pdf.

- California Geological Survey (CGS), 2004. Seismic Hazard Zone Report for the Lovejoy Buttes 7.5-Minute Quadrangle, Los Angeles County, California. Seismic Hazards Zone Report 086.
- California Geological Survey's (CGS,) 1997. Geology Guidelines for Evaluating and Mitigating Seismic Hazards, Special Publication 117.
- County of Los Angeles, Department of Health Services, Environmental Health (County of Los Angeles), 2000. *Procedures for Application for Approval of Private Sewage Disposal System Construction*.
- Environmental Science Associates (ESA), 2006. *Stephen Sorensen County Park Planning Study*. Prepared for the Los Angeles County Department of Public Works.
- Hart, E.W, 1997. Fault-Rupture Hazard Zones in California: Alquist-Priolo Special Studies Zones Act of 1972 with Index to Special Studies Zones Maps. California Division of Mines and Geology, Special Publication 42, revised and updated 1997.
- Jennings, C. W., 1994. Fault Activity Map of California and Adjacent Areas, California Division of Mines and Geologic Data Map No. 6, 1:750,000.
- Leighton Associates (Leighton), 2005. Feasibility Study, Proposed Leach Line Sewage Disposal Systems, Stephen Sorensen Park, Lake Los Angeles Area of Unincorporated Los Angeles County, California.
- Leighton Associates (Leighton), 2007. Preliminary Geotechnical Investigation Report Proposed Gymnasium/Community Building at Stephen Sorensen County Park, Lake Los Angeles, Los Angeles County, California.
- Los Angeles County Code, Title 26, June 2008.
- Los Angeles County General Plan, November 1980.
- Natural Resource Conservation Service (NRCS), 1969. Los Angeles County Soil Map.
- Peterson, M.D., Bryant, W.A., Cramer, C.H., 1996. Probabilistic Seismic Hazard Assessment for the State of California, California Division of Mines and Geology Open-File Report issued jointly with United States Geological Survey, CDMG 96-08 and USGS 96-706.
- Ponti, D.J., et al. *Map Showing Quaternary Geology of the Central Antelope Valley and Vicinity*, United States Geological Survey Open-File Report 81, 1981: 0737.

Hazards and Hazardous Materials

- California Department of Forestry and Fire Protection, Fire Hazard Severity Zone map for Los Angeles County, 2007. Accessed online on June 26, 2008:
http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_losangeles.php
- County of Los Angeles, County of Los Angeles General Plan 1993.
- Environmental Data Resources (EDR), The EDR Radius Map with GeoCheck© for Stephen Sorensen County Park, 400000 167th Street East, Palmdale, Ca. 93591. Inquiry Number: 1549330.1s, November 7, 2005.

FEMA website at http://www.fema.gov/hazard/wildfire/wf_prepare.shtm.

Hydrology and Water Quality

Federal Emergency Management Agency website.

<http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations>.

Flood Insurance Rate Map (FIRM), 1980. *Los Angeles County (Unincorporated Areas), Community-Panel Number 065043-0300-B, Panel 300 of 1275*.

Leighton Consulting, Inc., *Groundwater Monitoring Results, Fourth Quarter 2006, Stephen Sorenson Park*, Lake Los Angeles, January 29, 2007.

Los Angeles County Department of Public Works, *Development Planning for Storm Water Management A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP)*, http://dpw.lacounty.gov/wmd/npdes/table_contents.cfm, September 2002 Revision.

Los Angeles County General Plan, January 1993, page 79.

Pestrella, Mark. The Watershed Management division. July 22, 2008.

Southern California Association of Governments website at http://www.scag.ca.gov/wptf/pps/wptf120904_DeanEfsthathiou.ppt#277,2,Slide2.

Land Use and Planning

California Department of Conservation State Farmland Mapping, accessed on May 29, 2007, at http://ftp.consrv.ca.gov/pub/dlrp/fmmp/metadata/html/los_angeles_meta.htm.

County of Los Angeles, 2007 Draft Preliminary General Plan, *Land Use Element*.

County of Los Angeles, 2007 Draft Preliminary General Plan, *Conservation and Open Space Element*.

County of Los Angeles Department of Regional Planning, *Antelope Valley Areawide General Plan: A component of the Los Angeles County General Plan*, Adopted December 4, 1986. Accessed online at http://planning.co.la.ca.us/doc/plan/drp_pd_antelopevalley.pdf.

Department of Regional Planning GIS-NET, accessed on June 27, 2008 at http://regionalgis.co.la.ca.us/imf/sites/GISNET_pub/jsp/launch.jsp.

Noise

Caltrans, Technical Noise Supplement, 1998.

Caltrans, Transportation Related Earthborne Vibrations, 2002.

Cunniff, Patrick, Environmental Noise Pollution. John Wiley & Sons, New York. 1977.

Los Angeles County, County Code, June 24, 2008.

Los Angeles County, Draft General Plan Noise Element, 2007.

U.S. Environmental Protection Agency, 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

Public Services

City of Lancaster, Los Angeles County Sheriff's Department, *Law Enforcement Report*, September 2007.

County of Los Angeles Fire Department unofficial website, lacountyfire.com, accessed on June 25, 2008.

County of Los Angeles, *General Plan*, January 1993.

County of Los Angeles Public Library official website, <http://colapublib.org/libs/lakelosangeles/>, accessed June 25, 2008.

County of Los Angeles Sheriff's Department website, www.lasd.org/stations/for1/landcaster/index.html, accessed on December 11, 2006.

Freeman, Michael. Fire Chief, County of Los Angeles Fire Department NOP response. August 6, 2008.

Los Angeles County Police, Office of Public Safety, accessed on November 29, 2007 at <http://ops.co.la.ca.us/>.

U.S. Department of Education, Institute of Education Sciences National Center for Education Statistics official website, www.nces.ed.gov, accessed June 25, 2008.

Transportation/Traffic

California Department of Motor Vehicles, *California Vehicle Code Section 35000*, January 2005.

MTA, *Congestion Management Program (CMP) for Los Angeles County, Appendix D*, November 1995.

Thomas Bros., 2007. *The Thomas Guide 2007, Los Angeles County, Street Guide and Directory*.

Traffic Impact Guidelines, County of Los Angeles, Department of Public Works, January 1, 1997.

Utilities

Antelope Valley-East Kern Water Agency, 2005 Urban Water Management Plan, December 2005.

AVEK website at <http://www.avek.org/history.html>.

California Department of Water Resources, *The State Water Project Delivery Reliability Report*, 2005.

City of Los Angeles generation factors for potable water usage (City of Los Angeles, 2001).

City of Los Angeles, 2001. Sewer and Water Generation Factors.

County of Los Angeles Department of Public Works, Rosamond Community Services District, Quartz Hill Water District, Los Angeles County Sanitation Districts, 2005 Integrated *Urban Water Management Plan for the Antelope Valley*, December 16, 2005.

Integrated Waste Management Board official website,
<http://www.ciwmb.ca.gov/WasteChar/WasteGenRates/Service.htm> on February 13, 2007.

Perez, Angela, email communication, Carde-Ten, June 11, 2007.

Stetson, Nicole, Environmental Protection Specialist, Waste Management, personal communication on September 27, 2007.

CHAPTER 7

Mitigation Monitoring Program Compliance Report

Pursuant to Section 21081.6 of the Public Resources Code and the *CEQA Guidelines* Section 15097, a public agency is required to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to a proposed development. As stated in the Public Resources Code:

“...the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects.”

Section 21081.6 provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined prior to final certification of the EIR. The public agency may delegate reporting or monitoring responsibilities to another public agency or a private entity, which accept delegations. The lead agency, however, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the program.

The mitigation monitoring table below lists mitigation measures required of the project in order to reduce the significant effects of the project. These measures may also be included as conditions of approval for the project. These measures correspond to those outlined in the Executive Summary, and discussed in Sections 3.1 through 3.14. To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsibility for monitoring each measure. The developer will have the responsibility for implementing the measures, and the various County departments will have the primary responsibility for monitoring and reporting the implementation of the mitigation measures.

This Mitigation Monitoring Program is set up as a Compliance Report, with space for confirming the correct mitigation measures have been implemented for the Stephen Sorensen County Park Gymnasium/ Community Building Project. In order to sufficiently track and document the status of mitigation measures, the matrix below (**Table 7-1**) has been prepared with the following components:

- Mitigation measures;
- Monitoring phase;
- Enforcement agency;
- Monitoring agency;
- Action Indicating Compliance; and
- Verification of Compliance (for use during the reporting/monitoring).

Information pertaining to compliance with mitigation measures or any necessary modifications and refinements will be documented in the verification of compliance portion of the report.

**TABLE 7-1
MITIGATION MONITORING PROGRAM COMPLIANCE REPORT**

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
Aesthetics							
<u>AES-1: Lighting.</u> All on site lighting shall be designed to cast light downward, in the immediate vicinity of the light post or bollard. Lighting shall be placed and designed to avoid light spillage beyond the limits of the park.							
<u>AES-2: Glare.</u> To reduce any potential glare from the project headlights to a less than significant level, all new parking lot area adjacent to Avenue P shall include a block wall at a height that exceeds the level of vehicle headlights.							
Air Quality							
<u>AIR-1a:</u> The proposed project shall obtain Silver LEED status, or an equivalent or better rating for energy efficiency and other green building characteristics.							
<u>AIR 1b:</u> Applicant shall ensure that contractors maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions.							
<u>AIR 1c:</u> Wheel washers shall be installed where vehicles exit the construction site onto paved roads.							
<u>AIR 1d:</u> Haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.							
Biological Resources							
<u>BIO-1: Terrestrial Animals.</u> Prior to grading, a preconstruction survey for terrestrial animals shall be conducted by a qualified biologist with possession of a CDFG Scientific Collection Permit. Terrestrial species encountered should be moved off-site to areas with similar habitat conditions. Immediately following the preconstruction survey, silt fence shall be placed around the perimeter of the construction zone. The bottom of the silt fence shall be buried, so that animals cannot move underneath and onto the project site during construction.							
<u>BIO-2: Burrowing Owl.</u> No more than 30 days before any ground disturbing activities, a survey for burrows and burrowing owls shall be conducted by a qualified biologist. Surveys shall be based on the protocol described by the California Burrowing Owl Consortium (CBOC) (1993), which includes up to four surveys on different dates when potentially occupied burrows are present.							

**TABLE 7-1
MITIGATION MONITORING PROGRAM COMPLIANCE REPORT (CONT.)**

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
<p>If any burrowing owls are identified, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31 for owls), including a minimum 250-foot non-disturbance buffer zone around any occupied burrow. The size of non-disturbance buffer zone may be modified through coordination with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) based on site-specific conditions and existing disturbance levels.</p> <p>If burrowing owls are detected and ground disturbing activities are scheduled during the non-nesting season, the County shall avoid the burrows until burrowing owls no longer use the site as determined by a qualified biologist. If avoidance of burrows during the non-breeding season is not feasible, then the County shall implement a burrowing owl passive relocation program that shall adhere the CBOC guidelines regarding burrowing owls. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (CBOC, 1993). Regarding passive relocation, The Burrowing Owl Survey Protocol and Mitigation Guidelines state that:</p> <p>Owls should be excluded from burrows in the immediate impact zone and within a 50 meters (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that would be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation.</p>							
<p>BIO-3: Mojave Ground Squirrel. The project site supports marginal habitat for the Mojave ground squirrel and is within the known range of the species. Given the project implementation schedule, the County has opted to assume presence and obtain a CESA Section 2081 take permit for this state-listed species. In order to obtain the 2081 take permit, the County has agreed to purchase mitigation credits at a 1:1 ratio from the Desert Tortoise Preserve Committee, Inc., a California Public Benefit Corporation. The agreement to purchase mitigation credits pertains to acquisition, enhancement and management of replacement habitat at the Desert Tortoise Research Natural Area (DTRNA) and/or the DTRNA Expansion Area for the benefit of the Mohave ground squirrel (<i>Spermophilus mohavensis</i>). The agreed upon</p>							

**TABLE 7-1
MITIGATION MONITORING PROGRAM COMPLIANCE REPORT (CONT.)**

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
<p>1:1 mitigation ratio is based on the project site supporting low quality habitat for the Mojave ground squirrel based on existing vegetation and surrounding land uses.</p> <p>Because the project site is moderately disturbed and contains marginal habitat for supporting special-status plant species, the potential for special-status plant to occur on the project site is low. The 1:1 mitigation credits that would be purchased from the Desert Tortoise Preserve Committee would mitigate (highly unlikely) impacts to <i>Croton cryptanthus</i>, if present.</p> <p>BIO-4: Southern Grasshopper Mouse. Preconstruction surveys for the southern grasshopper mouse shall occur prior to ground disturbing activities. Five consecutive nighttime trapping surveys shall be conducted by a qualified biologist. If southern grasshopper mice are trapped, they shall be relocated to a nearby location containing suitable habitat. Trapping techniques and methodology, and release locations shall be coordinated with the CDFG prior to initiating surveys. A completion letter shall be prepared and submitted to the County and the CDFG within 30 days following the completion of trapping surveys.</p> <p>BIO-5: Nesting Resident and/or Migratory Birds including Raptors. Within 30 days of any project ground disturbing or vegetation removal actions during the nesting season (February 1 through August 31), the County shall have a qualified biologist conduct a pre-construction nesting bird and survey. The biologist shall be qualified to determine the status and stage of nesting efforts by resident and/or migratory birds including locally breeding raptor species without causing intrusive disturbance. This survey should cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.</p> <p>If an active nesting effort is confirmed or considered likely by the biologist, the nest site shall be avoided and a non-disturbance buffer zone established by the biologist and approved by the County in consultation with the CDFG. The nest site avoidance and non-disturbance buffer zone shall be maintained until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist. If nest avoidance is not feasible, then the County shall obtain the necessary permits or authorizations from the USFWS and/or CDFG to impact the nesting effort that could require taking the young nestlings to a qualified wildlife rehabilitation center.</p> <p>Cultural Resources</p> <p>CUL-1: Construction Monitoring. An archaeologist and a Native American monitor familiar with CA-LAN-192 shall monitor all earth disturbances, including project grading, trenching, or other construction</p>							

**TABLE 7-1
MITIGATION MONITORING PROGRAM COMPLIANCE REPORT (CONT.)**

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
<p>activity that has the potential to impact cultural deposits. The monitors <input type="checkbox"/> objectives would be to collect unique or diagnostic materials, watch for human remains or other archaeological features, temporarily redirect construction to another area if human remains or other features are encountered, and remove or relocate such features or remains in accordance with state law and standard archaeological practice prior to the resumption of construction. If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted while the archaeological monitor assesses the significance of the find. The monitors will record representative profiles of the area for comparison against known deposits and will screen samples from cultural strata to confirm that the deposits in these areas are consistent with observations made during prior testing.</p> <p>CUL-2: Construction Orientation. Prior to initiation of the project grading and construction program, the project archaeologist shall provide a mandatory cultural resource orientation to all construction personnel working on the site. The orientation will include a description of the kinds of cultural resources previously identified at the site and the steps to be taken if additional material is unearthed during construction.</p> <p>CUL-3: Exposure of Previously Unidentified Paleontological Resources. In the event that paleontological resources are discovered, the project proponent (depending upon the project component) will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in <i>CEQA Guidelines</i> Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to the project proponent for review and approval prior to implementation.</p> <p>CUL-4: Exposure of Previously Unidentified Human Remains. In concert with CUL-1 and CUL-2, mitigation for exposure of previously unidentified human remains is as follows <input type="checkbox"/> if human remains are found, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the county Coroner has made the</p>							

TABLE 7-1
MITIGATION MONITORING PROGRAM COMPLIANCE REPORT (CONT.)

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
necessary findings as to origin and disposition pursuant to PRC 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American who will then serve as consultant on how to proceed with the remains (e.g. avoidance, reburial).							
Geology							
GEO-1: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. Site specific geotechnical investigations and or recommendations shall be prepared for the approved gymnasium and other associated facilities. Prior to final building approvals, geotechnical engineering recommendations regarding mitigation and reduction of seismic hazards for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ¹ The purpose of these guidelines is to protect the public safety from seismic effects.							
GEO-2: Prior to construction, a California certified engineering geologist or registered geotechnical engineer will review the finalized project site plans. The project applicant shall prepare a site specific, design level geotechnical investigation for the approved project to determine the particular project designs and provide site specific engineering recommendations for mitigation of liquefiable soils. Liquefiable soils under the conditions described in the geotechnical report shall be mitigated according to the requirements of the Seismic Hazards Mapping Act. Prior to incorporation into the project, geotechnical engineering recommendations regarding the mitigation and reduction of liquefaction for the site shall be reviewed for compliance with the <i>Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.</i> ² The purpose of these guidelines is to protect the public safety from seismic effects such as liquefaction.							
GEO-3: The earthwork and site preparation of the project site, prior to placement of project improvements including foundations, shall include the mitigation of expansive soils in accordance with Section 1805.8 of							

¹ Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

² Leighton Consulting, Inc. Preliminary Geotechnical Investigation Report Proposed Gymnasium and Community Building at Stephen Sorensen County Park. May 22, 2007.

**TABLE 7-1
MITIGATION MONITORING PROGRAM COMPLIANCE REPORT (CONT.)**

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
the 2007 California Building Code (or equivalent within a superseding version if applicable). The recommendations for mitigation of expansive soils shall be made by a California licensed geotechnical engineer or engineering geologist, and the approved project will comply with said report.							
Noise							
<u>NOI-1:</u> Construction Operation Hours and Noticing. Project construction will be limited to between the hours of 7:00 a.m. and 4:00 p.m. (which is reduced from the normally allowable Los Angeles County construction hours of 7:00 a.m. and 7:00 p.m.). Signs shall be posted on-site informing neighbors of the duration and hours of the construction activities.							
<u>NOI-2:</u> Construction Equipment Maintenance. All on-site construction equipment shall be inspected weekly by the contractor to ensure that they have properly operating mufflers and that are in good operating condition.							
<u>NOI-3:</u> Construction Staging Areas. All construction staging areas will be as far away as is practical from the nearest homes. Construction staging will occur adjacent to the area of grading in the proposed parking lot area, which is no closer than 250 feet from the nearest sensitive noise receptors. The staging for construction of the Gymnasium/Community Building will occur on the proposed parking lot area of the site. Staging for the parking lot will occur on other open areas of the park.							
Utilities							
<u>UTL-1:</u> Landscaped area shall be designed with drought tolerant species. Planting beds shall be heavily mulched in accordance with water-conserving landscape design practices.							

STEPHEN SORENSEN COUNTY PARK, GYMNASIUM/ COMMUNITY BUILDING PROJECT

Draft Environmental Impact Report/
Environmental Assessment –
Appendices Only

Prepared for
County of Los Angeles
Department of Public Works

July 2009



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Stephen Sorensen County Park Gymnasium/Community Building Project Appendices Only

Appendices

- Appendix A Notice of Preparation/NOP Comment Letters/LEED Checklist
- Appendix B Stephen Sorensen County Park Planning Study
- Appendix C Air Quality Calculations
- Appendix D SHPO Letters
- Appendix E Natural History Museum of Los Angeles County Letter
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Appendix A

Notice of Preparation/
NOP Comment Letters/
LEED Checklist





**LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT
JUNE 16, 2008**

To: Interested Party

Project: STEPHEN SORENSEN COUNTY PARK
NEW GYMNASIUM AND COMMUNITY BUILDING PROJECT
SPECS. 6865; C.P. 69276

Location: Unincorporated Community of Lake Los Angeles In Northern Los Angeles County,
California

**Interstate 15 - 6801 East Avenue P, approximately 15 miles east of the
City of Lancaster**

The County is soliciting any comments you may have regarding the scope of the environmental analysis for the proposed project relevant to your agency's statutory responsibilities in connection with the proposed project (pursuant to California Code of Regulations, Title 14, Section 15082(b)). If this project requires an approval from your agency, the Environmental Impact Report (EIR) may serve as the environmental document for that action, under the California Environmental Quality Act (CEQA).

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to:

County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331
Attention Mohamed Sultan, PE
msultan@dpw.lacounty.gov

Signed Mohamed Sultan

Date 6/16/08

Name Mohamed Sultan

ORGANIZATIONS AND INTERESTED PARTIES: As lead agency under CEQA, the County of Los Angeles Department of Public Works is soliciting comments you may have regarding the content of the environmental analysis associated with the proposed project. Please see "Project Description" for an understanding of the proposed content of the EIR. This notice is being sent to responsible agencies, trustee agencies, and other interested parties/individuals. Responsible agencies are those public agencies (aside from the lead agency) that have a role in approving or carrying out the project. Responsible agencies will rely upon the EIR when considering approvals to the project. Trustee agencies are those state agencies that have jurisdiction by law over natural resources affected by the project and that are held in trust for the people of the State of California. Trustee agencies will also rely upon the EIR when considering approvals related to the project. When the draft EIR is published, a notice will be sent to responsible agencies, trustee agencies, and others who respond to this Notice of Preparation (NOP) or who otherwise indicate that they would like to be notified of the availability of the draft EIR so that they may provide comments on the draft EIR.

PROJECT TITLE: Stephen Sorensen County Park Gymnasium/Community Building Project.

PROJECT PROPONENT: The County of Los Angeles Department of Public Works.

PROJECT LOCATION AND SETTING: Stephen Sorensen County Park is located in the unincorporated community of Lake Los Angeles in northern Los Angeles County, California. The Assessor's Parcel Number (APN) for the site is 3073-001-902. The 100-acre site is located at 16801 East Avenue P, approximately 15 miles east of the City of Lancaster (see Figure 1, attached). Local access to the project site is provided from 170th Street East and Avenue P. Regional access to the project site is provided by State Route 138 (SR-138), which is approximately 6 miles to the south. This highway is a east-west trending highway that connects to Antelope Valley Freeway (SR-14) to the west and to Interstate 15 (I-15) to the southeast.

PROJECT DESCRIPTION: Proposed project improvements consist of a combined gymnasium and community building with a multi-purpose room and a classroom, an enlarged parking lot area with 57 new parking spaces, landscaping, irrigation, and security lighting. The gymnasium/community building will meet the United States Green Building Council's Silver standard under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. All building amenities will meet the standards of the Americans with Disabilities Act. Previous park improvements constructed to date, consist of: 1) a three-acre development including an ADA compliant children's playground with age appropriate play equipment, men's and women's restrooms, landscape and irrigation, security lighting, parking and picnic tables in the central-southern portion of the park, and 2) a 12-acre expansion in the southwestern portion of the park, just east of the currently proposed gymnasium/community building site. These improvements included two lighted basketball courts, baseball diamonds with bleachers, soccer fields, security lighting, landscaping and irrigation, walkways and additional parking. The proposed project will occur on an approximately 3.0 acre site located to the west of the existing park development and to northwest of the existing 94-space parking lot.

PROJECT BACKGROUND: As the project will provide community-serving facilities, a priority has been placed on community involvement. The County held several community meetings on the project to solicit comments and concerns, and the proposed project design was revised to include suggestions from the citizens to the extent feasible.

POTENTIAL ENVIRONMENTAL EFFECTS TO BE EVALUATED IN THE EIR: The County has determined that a full EIR is required because the proposed project could result in potentially significant environmental impacts. The EIR will address the potential impacts of the project on aesthetics (visual quality); air quality; biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; land use, plans, and policies; noise levels; population and housing; public services; recreation; traffic and circulation; utilities and service systems; and growth inducement. Where impacts are found not significant, the EIR will provide for reasoning for such conclusions (e.g., mineral resources, agriculture). The EIR will evaluate the project's potential impacts on the environment, provide feasible mitigation measures if significant impacts are found, evaluate cumulative impacts, and analyze feasible alternatives to the project as required by CEQA.

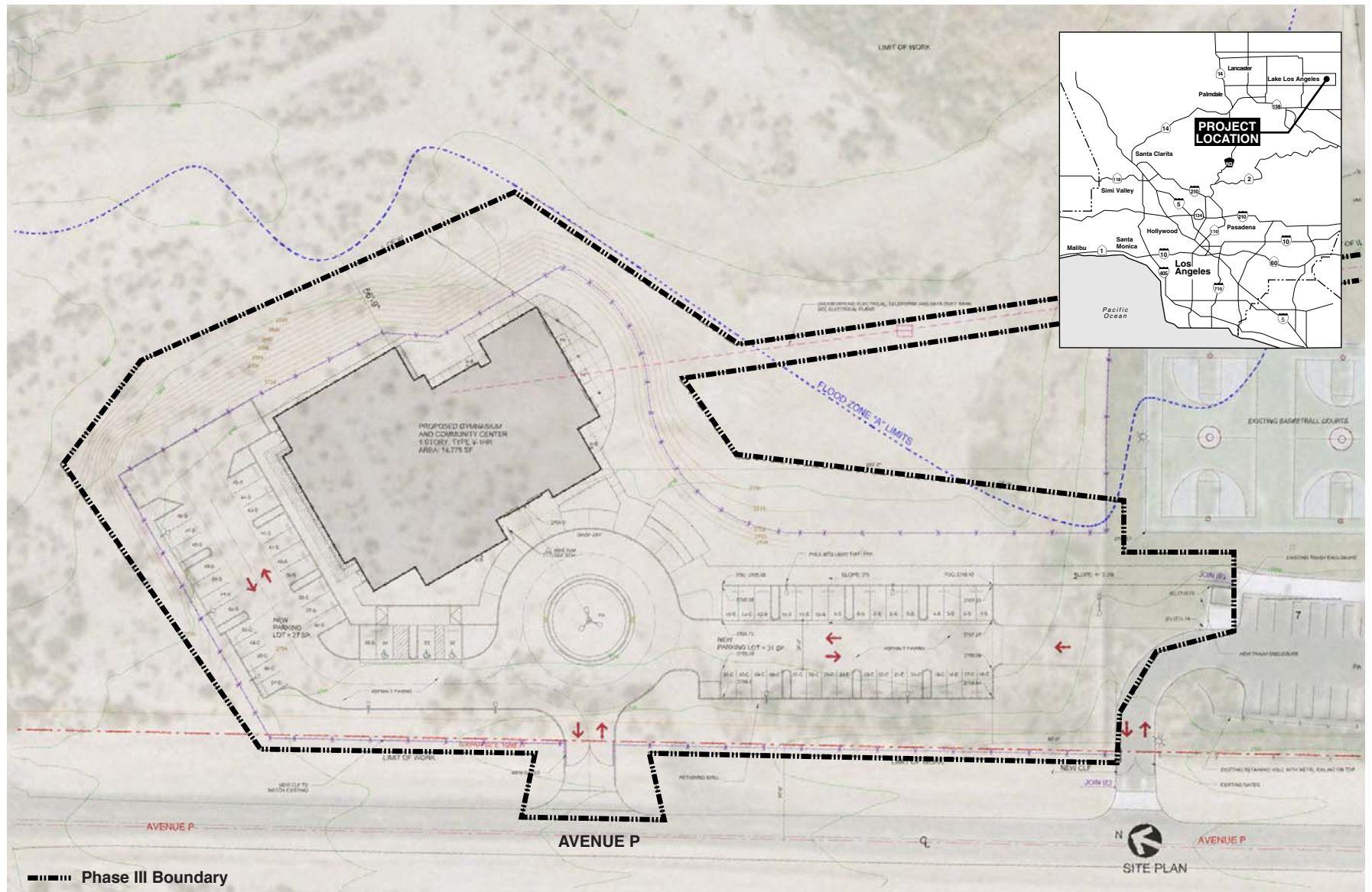
PUBLIC REVIEW PERIOD: The NOP will be available for public review and comment for a period of 30 days (pursuant to California Code of Regulations, Title 14, Section 15103). The comment period begins June 17, 2008, and ends on July 17, 2008.

If you have any questions, please call Mr. Mohamed Sultan at (626) 300-2349.

WRITTEN COMMENTS: Send your comments to the following location, and please indicate your name or an appropriate contact person for your agency or organization:

County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331
Attention Mohamed Sultan, PE
MSULTAN@dpw.lacounty.gov

A public scoping meeting will not be held for this project. If you have any questions or comments regarding this project, please contact Mohamed Sultan.



SOURCE: GlobeXplorer 01-02-2006; Carde Ten Architects, 2007; ESA, 2007.

Stephen Sorensen County Park MND . 205237.01

Figure 1-1
Regional Location and Site Plan



ARNOLD SCHWARZENEGGER
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

June 17, 2008

To: Reviewing Agencies

Re: Stephen Sorensen County Park New Gymnasium and Community Building Project
SCH# 2008061091

Attached for your review and comment is the Notice of Preparation (NOP) for the Stephen Sorensen County Park New Gymnasium and Community Building Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Mohamed Sultan
County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2008061091
Project Title Stephen Sorensen County Park New Gymnasium and Community Building Project
Lead Agency Los Angeles County

Type NOP Notice of Preparation
Description Proposed project improvements consist of a combined gymnasium and community building with a multi-purpose room and a classroom, an enlarged parking lot area with 57 new parking spaces, landscaping, irrigation, and security lighting. The gymnasium/community building will meet the United States Green Building Council's Silver standard under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. All building amenities will meet the standards of the Americans with Disabilities Act.

Lead Agency Contact

Name	Mohamed Sultan	
Agency	County of Los Angeles Department of Public Works	
Phone	626 300-2349	Fax
email	msultan@dpw.lacounty.gov	
Address	900 South Fremont Avenue	
City	Alhambra	State CA Zip 91803-1331

Project Location

County Los Angeles
City
Region
Cross Streets 170th Street East and Avenue P
Lat / Long
Parcel No. 3073-001-902
Township

Range

Section

Base

Proximity to:

Highways SR-138,SR-14,I-15
Airports
Railways
Waterways
Schools
Land Use

Project Issues Aesthetic/Visual; Air Quality; Biological Resources; Archaeologic-Historic; Geologic/Seismic; Toxic/Hazardous; Water Quality; Landuse; Public Services; Noise; Population/Housing Balance; Recreation/Parks; Traffic/Circulation; Other Issues; Growth Inducing

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 6 (Victorville)

Date Received 06/17/2008 **Start of Review** 06/17/2008 **End of Review** 07/16/2008

NOP Distribution List

Resources Agency

- ☒ Resources Agency
Nadell Gayou
- ☐ Dept. of Boating & Waterways
David Johnson
- ☐ California Coastal Commission
Elizabeth A. Fuchs
- ☐ Colorado River Board
Gerald R. Zimmerman
- ☒ Dept. of Conservation
Sharon Howell
- ☐ California Energy Commission
Paul Richins
- ☐ Cal Fire
Allen Robertson
- ☐ Office of Historic Preservation
Wayne Donaldson
- ☒ Dept of Parks & Recreation
Environmental Stewardship Section
- ☐ Central Valley Flood Protection Board
Mark Herald
- ☐ S.F. Bay Conservation & Dev't. Comm.
Steve McAdam
- ☒ Dept. of Water Resources
Resources Agency
Nadell Gayou

Fish and Game

- ☐ Depart. of Fish & Game
Scott Flint
Environmental Services Division
- ☐ Fish & Game Region 1
Donald Koch
- ☐ Fish & Game Region 1E
Laurie Harnsberger

- ☐ Fish & Game Region 2
Jeff Drongesen
- ☐ Fish & Game Region 3
Robert Floerke
- ☐ Fish & Game Region 4
Julie Vance
- ☒ Fish & Game Region 5
Don Chadwick
Habitat Conservation Program
- ☐ Fish & Game Region 6
Gabrina Gatchel
Habitat Conservation Program
- ☐ Fish & Game Region 6 I/M
Gabrina Gatchel
Inyo/Mono, Habitat Conservation Program
- ☐ Dept. of Fish & Game M
George Isaac
Marine Region

Other Departments

- ☐ Food & Agriculture
Steve Shaffer
Dept. of Food and Agriculture
- ☐ Depart. of General Services
Public School Construction
- ☐ Dept. of General Services
Robert Sleppy
Environmental Services Section
- ☐ Dept. of Health Services
Veronica Malloy
Dept. of Health/Drinking Water

Independent

Commissions, Boards

- ☐ Delta Protection Commission
Debby Eddy
- ☐ Office of Emergency Services
Dennis Castrillo
- ☐ Governor's Office of Planning & Research
State Clearinghouse
- ☒ Native American Heritage Comm.
Debbie Treadway

County: Los Angeles

- ☐ Public Utilities Commission
Ken Lewis
- ☐ Santa Monica Bay Restoration
Guangyu Wang
- ☐ State Lands Commission
Jean Sarino
- ☐ Tahoe Regional Planning Agency (TRPA)
Cherry Jacques

Business, Trans & Housing

- ☐ Caltrans - Division of Aeronautics
Sandy Hesnard
- ☐ Caltrans - Planning
Terri Pencovic
- ☒ California Highway Patrol
Shirley Kelly
Office of Special Projects
- ☐ Housing & Community Development
Lisa Nichols
Housing Policy Division

Dept. of Transportation

- ☐ Caltrans, District 1
Rex Jackman
- ☐ Caltrans, District 2
Marcelino Gonzalez
- ☐ Caltrans, District 3
Jeff Pulverman
- ☐ Caltrans, District 4
Tim Sable
- ☐ Caltrans, District 5
David Murray
- ☐ Caltrans, District 6
Moses Stites
- ☒ Caltrans, District 7
Vin Kumar

- ☐ Caltrans, District 8
Dan Kopulsky
- ☐ Caltrans, District 9
Gayle Rosander
- ☐ Caltrans, District 10
Tom Dumas
- ☐ Caltrans, District 11
Jacob Armstrong
- ☐ Caltrans, District 12
Bob Joseph

Cal EPA

Air Resources Board

- ☐ Airport Projects
Jim Lerner
- ☐ Transportation Projects
Ravi Ramalingam
- ☐ Industrial Projects
Mike Tollstrup

- ☐ California Integrated Waste Management Board
Sue O'Leary

- ☐ State Water Resources Control Board
Regional Programs Unit
Division of Financial Assistance

- ☐ State Water Resources Control Board
Student Intern, 401 Water Quality Certification Unit
Division of Water Quality

- ☐ State Water Resources Control Board
Steven Herrera
Division of Water Rights

- ☒ Dept. of Toxic Substances Control
CEQA Tracking Center

- ☐ Department of Pesticide Regulation

SCH# 2008061091

Regional Water Quality Control Board (RWQCB)

- ☐ RWQCB 1
Cathleen Hudson
North Coast Region (1)
- ☐ RWQCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)
- ☐ RWQCB 3
Central Coast Region (3)
- ☐ RWQCB 4
Teresa Rodgers
Los Angeles Region (4)
- ☐ RWQCB 5S
Central Valley Region (5)
- ☐ RWQCB 5F
Central Valley Region (5)
Fresno Branch Office
- ☐ RWQCB 5R
Central Valley Region (5)
Redding Branch Office
- ☐ RWQCB 6
Lahontan Region (6)
- ☒ RWQCB 6V
Lahontan Region (6)
Victorville Branch Office
- ☐ RWQCB 7
Colorado River Basin Region (7)
- ☐ RWQCB 8
Santa Ana Region (8)
- ☐ RWQCB 9
San Diego Region (9)

☐ Other _____

Last Updated on 02/21/08

PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Los Angeles

ss

Notice Type: NOTICE OF PREPARATION

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the Antelope Valley Press, a newspaper of general circulation, printed and published daily in the city of Palmdale, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, under date of October 24, 1931, Case Number 328601; Modified Case Number 657770 April 11, 1956; also operating as the Ledger-Gazette, adjudicated a legal newspaper June 15, 1927, by Superior Court decree No. 224545; also operating as the Desert Mailer News, formerly known as the South Antelope Valley Foothill News, adjudicated a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California on May 29, 1967, Case Number NOC564 and adjudicated a newspaper of general circulation for the City of Lancaster, State of California on January 26, 1990, Case Number NOC10714, Modified October 22, 1990; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

June 17, 2008

I certify (or declare) under penalty of perjury that the fore-going is true and correct.


Signature

Dated: June 17, 2008

Executed at Palmdale, California

ANTELOPE VALLEY PRESS
37404 SIERRA HWY., PALMDALE CA 93550
Telephone (661)267-4112/Fax (661)947-4870

The space above for file stamp only

NOTICE OF PREPARATION FOR ENVIRONMENTAL IMPACT REPORT

PROJECT: Stephen Sorensen
Park Gymnasium and Commu-
nity Building

LEAD AGENCY: County of Los
Angeles, Department of Public
Works

PUBLIC REVIEW AND AVAILABILITY OF DOCU- MENTS

In conformance with Section 15082 of the State of California Environmental Quality Act (CEQA) guidelines, the County of Los Angeles has prepared a Notice of Preparation (NOP) for the Draft Environmental Impact Report (EIR) for the proposed project. The public review for the NOP starts June 17, 2008 and ends July 17, 2008. The NOP is available for review during regular business hours at the following locations:

County of Los Angeles
Department of Public Works
900 South Fremont Avenue, 5th
Floor
Alhambra, CA 91803
676-300-3245

Lake Los Angeles Library
16921 East Avenue O
Palmdale, CA 93591
661-264-0533

Written comments regarding this environmental document must be submitted to Mr. Mohamed Sultan at the address shown below no later than July 17, 2008 to be included into the Administrative Record for the Draft EIR:

Mr. Mohamed Sultan
County of Los Angeles
Department of Public Works
900 South Fremont Avenue, 5th
Floor
(626) 300-2349
Fax: (626) 979-5320

PROJECT LOCATION

Stephen Sorensen County Park is located in the unincorporated community of Lake Los Angeles in northern Los Angeles County, California. The 100-acre site is located at 16901 East Avenue P, approximately 15 miles east of City of Lancaster. Local access to the project site is provided from 170th Street East and Avenue P. Regional access to the project site is provided by State Route 138 (SR-138), which is approximately six miles to the south. This highway is a east-west trending highway that connects to Antelope Valley Freeway (SR-14) to the west, and to Interstate 15 (I-15) to the southeast.

PROJECT DESCRIPTION

Proposed project improvements consists of a combined gymnasium and community building with a multi-purpose room and a classroom, an enlarged parking lot with 57 new parking spaces, landscaping, irrigation and security lighting. The gymnasium/community building will meet the United States Green Building Council's Silver standard under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. All building amenities will meet the standards of the Americans with Disabilities Act (ADA). The proposed project will occur on an approximately 3.0 acre site located to the west of the existing park development and to north west of the existing 94 space parking lot.

Antelope Valley Press
CN788743 DP140321 Jun 17,
2008

July 7, 2008

County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331
Attention Mohamed Sultan, PE
msultan@dpw.lacounty.gov

Dear Sir:

The Lake Los Angeles Park Association is dedicated to promoting and preserving the community life style in Lake Los Angeles. Our primary task is the development of Deputy Steven Sorensen Park that is located in the geographical center of Lake Los Angeles. According to our bylaws the "Duties of the Board of Directors shall be: To act as good faith agents of the LLAPA in the establishment, completion, improvement and maintenance of the Lake Los Angeles Community Park."

We in Lake Los Angeles are very supportive of parks as although we pay the same assessment that other communities of LA Unincorporated Areas pay to help fund and maintain the County Parks system, we pay (and have paid for more than a decade) an additional assessment to ensure our community is served by recreational services. Part of the Gymnasium/Community Building funding is from that assessment that we are elected by the citizens of Lake Los Angeles to administer. We take our responsibilities seriously.

In your document you state: "This notice is being sent to responsible agencies, trustee agencies, and other interested parties/individuals." As such, we were surprised that we were not sent a copy of the Environmental Impact Report and request any findings of the same report be sent to us.

We are very concerned with anything that may potentially cause the building to be delayed. As such any inaccuracies in the document concern us deeply, i.e.: **Interstate 15 -6801 East Avenue P, approximately 15 miles east of the City of Lancaster.**

The correct address is: 16801 East Avenue P. People in the area know Sorensen Park as being on the Palmdale side of Lake Los Angeles (15 miles east of Palmdale). We are hoping that the additional description of the property is adequate to saving us any potential of a lengthy EIR timeline.

This may seem picky, but we have been waiting a long time, and we are here to help ensure a timely completion to this important improvement for the people of Lake Los Angeles. Please be sure to include us in planning and immediately send any additional

documents and reports to either the email or address below. Also, we have the ability to post documents on the web page to assist communication with the community at large.

Thank you for your time.

Mary Hanna, Secretary
Lake Los Angeles Community Park Association
P.O. Box 500088
Lake Los Angeles, CA 93591
mhanna@techcraze.com
<http://www.lakelapark.org>

2008 Lake Los Angeles Park Board

Dominic Fohrenkam , President ,
Jackie Cruz, Vice President
Tina Alcala, Treasurer
Mary Hanna, Secretary
Yvonne Malikowski , Historian
Kathie Fohrenkam, member
Robin Nute, member

From: Sultan, Mohamed - Consultant [mailto:MSULTAN@dpw.lacounty.gov]
Sent: Thursday, July 31, 2008 2:22 PM
To: Laura Kaufman
Subject: Stephen Sorensen Park Gym - comments on NOP

Laura,

Please find below the comments of Lake Los Angeles Community Park Association.

Thanks,

Mohamed Sultan, PE, CCM
LACDPW
Project Management Division I
626-300-2349

From: Mary Hanna [mailto:mary@techcraze.com]
Sent: Monday, July 07, 2008 9:41 PM
To: Sultan, Mohamed - Consultant
Cc: Norm Hickling; takata@ceo.lacounty.gov
Subject: Sorensen Gymnasium/Community Building



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

August 6, 2008

Mr. Mohamed Sultan
County of Los Angeles, Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Dear Mr. Sultan:

**NOTICE OF PREPARATION, PROJECT: STEPHEN SORENSEN COUNTY PARK, NEW
GYMNASIUM AND COMMUNITY BUILDING PROJECT, SPECS. 6865; C.P. #69276
(FFER #200800176)**

The Notice of Preparation has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. The subject development will receive fire protection and paramedic services from the County of Los Angeles Fire Department. Fire Station 114, located at 39939 N. 170th Street East, Lake Los Angeles, CA 93591-9618, is approximately .5 miles from the project site. It has a 3-person assessment engine company (an engine company with some limited paramedic capabilities) and a supplemental call engine staffed as needed.

LAND DEVELOPMENT UNIT: GENERAL REQUIREMENTS:

1. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.
2. The proposed development may necessitate multiple ingress/egress access for the circulation of traffic, and emergency response issues.
3. Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width. The roadway

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS	BRADBURY	CUDAHY	HAWTHORNE	LA MIRADA	MALIBU	POMONA	SIGNAL HILL
ARTESIA	CALABASAS	DIAMOND BAR	HIDDEN HILLS	LA PUENTE	MAYWOOD	RANCHO PALOS VERDES	SOUTH EL MONTE
AZUSA	CARSON	DUARTE	HUNTINGTON PARK	LAKESIDE	NORWALK	ROLLING HILLS	SOUTH GATE
BALDWIN PARK	CERRITOS	EL MONTE	INDUSTRY	LANCASTER	PALMDALE	ROLLING HILLS ESTATES	TEMPLE CITY
BELL	CLAREMONT	GARDENA	INGLEWOOD	LAWDALE	PALOS VERDES ESTATES	ROSEMEAD	WALNUT
BELL GARDENS	COMMERCE	GLENDORA	IRVINDALE	LOMITA	PARAMOUNT	SAN DIMAS	WEST HOLLYWOOD
BELLFLOWER	COVINA	HAWAIIAN GARDENS	LA CANADA-FLINTRIDGE	LYNWOOD	PICO RIVERA	SANTA CLARITA	WESTLAKE VILLAGE
			LA HABRA				WHITTIER

4. shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.
5. Fire Department requirements for access, fire flows and hydrants are addressed during the building permit stage.

COMMERCIAL REQUIREMENTS:

6. Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is strongly suggested that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use
7. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.
8. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:
 - a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant
 - b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant.
 - c. When cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and mid block.
 - d. Additional hydrants will be required if the hydrant spacing exceeds specified distances.
9. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all Driveways exceeding 150 feet in length and at the end of all cul-de-sacs.
10. All on-site driveways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The 28-foot width does not allow for parking, and shall be designated as a Fire Lane, and have appropriate signage. The centerline of the on-site driveway shall be located parallel to and within 30 feet of an exterior wall on one side of the proposed structure. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building.
11. The 28 feet in width shall be increased to:
 - a. Provide 34 feet in width when parallel parking is allowed on one side of the access way.
 - b. Provide 36 feet in width when parallel parking is allowed on both sides of the access way.

Mr. Mohamed Sultan
August 6, 2008
Page 3

- c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.
 - d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.
12. The County of Los Angeles Fire Department, Land Development Unit's comments are only general requirements during the Environmental Review Process. Specific fire and life safety requirements will be addressed and conditions set at the building and fire plan check phase. There may be additional requirements during this time.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

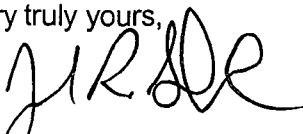
1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. There are no comments at this time.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,



JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:lj



Linda S. Adams
Secretary for
Environmental Protection



Department of Toxic Substances Control

Maureen F. Gorsen, Director
9211 Oakdale Avenue
Chatsworth, CA 91311



Arnold Schwarzenegger
Governor

July 15, 2008

Mr. Mohamed Sultan
County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331

NOTICE OF PREPARATION FOR THE STEPHEN SORENSEN COUNTY PARK NEW GYMNASIUM AND COMMUNITY BUILDING PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT, SCH NO. 2008061091

Dear Mr. Sultan:

The Department of Toxic Substances Control (DTSC) has received your Notice of Preparation of draft Environmental Impact Report (EIR) for the project mentioned above.

Based on the review of the document, DTSC comments are as follows:

1. The draft EIR needs to identify and determine whether current or historic uses at the Project site (Site) have resulted in any release of hazardous wastes/substances.
2. The draft EIR needs to identify any known or potentially contaminated area within the Site. For all identified areas, the draft EIR needs to evaluate whether conditions at the Site pose a threat to human health or the environment.
3. The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any area that may require remediation, and which government agency will provide appropriate regulatory oversight.
4. If during construction of the project, soil contamination is suspected, construction in the area should stop, and appropriate health and safety procedures should be implemented. If it is determined that contaminated soils exist, the draft EIR should identify how any required investigation and/or remediation will be conducted, and which government agency will provide regulator oversight.

Mr. Mohamed Sultan
July 15, 2008
Page 2

DTSC provides guidance for Preliminary Endangerment Assessment preparation and cleanup oversight through the Voluntary Cleanup Program (VCP). For additional information on the VCP please visit DTSC's web site at www.dtsc.ca.gov. If you would like to meet and discuss this matter further, please me at (818) 717-6550.

Sincerely,



Alberto T. Valmidiano
Project Manager
Brownfields and Environmental Restoration Program – Chatsworth Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P. O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
1001 "I" Street, 22nd Floor, M.S. 22-2
Sacramento, California 95814



California Regional Water Quality Control Board Lahontan Region



Linda S. Adams
*Secretary for Environmental
Protection*

Victorville Office
14440 Civic Drive, Suite 200, Victorville, California 92392
(760) 241-6583 • Fax (760) 241-7308
<http://www.waterboards.ca.gov/lahontan>

Arnold Schwarzenegger
Governor

July 14, 2008

File: Environmental Doc Review
Los Angeles County

Mohamed Sultan
County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

COMMENTS ON THE NOTICE OF PREPARATION FOR THE ENVIRONMENTAL IMPACT REPORT, PROJECT TO DEVELOP STEPHEN SORENSEN COUNTY PARK NEW GYMNASIUM AND COMMUNITY BUILDING PROJECT, LOCATED AT 170TH STREET EAST AND AVENUE P, UNINCORPORATED COMMUNITY OF LAKE LOS ANGELES APN: 3073-001-902 (SCH# 2008061091)

California Regional Water Quality Control Board, Lahontan Region (Water Board) staff has reviewed the Notice of Preparation dated June 19, 2008 for an Environmental Impact Report (EIR) on the above-referenced Project.

General Comments

The Regional Board has adopted a Water Quality Control Plan for the Lahontan Region (Basin Plan), which contains prohibitions, water quality standards, and policies for implementation of those standards. The Basin Plan is available on line at the Regional Board's Internet site at <http://www.waterboards.ca.gov/lahontan/>. The Project must comply with all applicable water quality standards and prohibitions of the Basin Plan.

Hydrology and Water Quality

The proposed Project involves the development of new gymnasium and community building on currently vacant and undeveloped land. This development could alter the existing drainage patterns of rainfall absorption and surface water runoff, causing an increase in rates of stormwater discharge.

Urban development degrades water quality through a complex of interrelated causes and effects, which, unmanaged, ultimately destroy the physical, chemical, and biological integrity of the watersheds in which they occur. The primary potential adverse impacts of urban development projects on water quality are:

- the direct physical impacts to aquatic, wetland, and riparian habitat and other beneficial uses;

California Environmental Protection Agency

- generation of construction-related and post-construction urban pollutants;
- alteration of flow regimes and groundwater recharge as a result of impervious surfaces and storm drain collector systems; and
- disruption of watershed level aquatic functions, including pollutant removal, floodwater retention, and habitat connectivity.

These factors have historically resulted in a cycle of destabilized stream channels, poor water quality, and engineered solutions to disrupted flow patterns, culminating in loss of natural functions and societal values in the affected basins. The number and variability of the pathways through which water quality degradation can occur complicates analysis, but understanding how these pathways operate within the specific circumstances of this project is essential to effectively mitigating the adverse effects.

In order to evaluate the project regarding the above potential impacts, the Project must describe how it will avoid or minimize each potential cause of water quality degradation, what effects can not be avoided through project design, and the magnitude of the remaining adverse effects.

It must also address how hydromodification may result in substantial additional sources of polluted runoff, and promote recharge of poorer quality water or otherwise substantially degrade groundwater quantity or quality. Drainage channels should be avoided to minimize impacts, and any unavoidable impacts to these waters must be minimized and mitigated. Mitigation must be identified in the EIR including timing of construction. Mitigation must replace functions and values of drainages lost. It is not sufficient to state that mitigation will be accomplished through permits acquired and that appropriate governmental agencies will be notified.

Additionally, please be sure that the EIR completely evaluates the potential cumulative impacts of the project considering other existing and potential projects.

Effective Stormwater Management

The EIR for this project must specifically identify features for both the short-term (construction) and the post-construction periods that will control stormwater on-site and minimize the increased run off from the site due to construction of impervious surface. The foremost method of reducing impacts to watersheds from urban development is "Low Impact Development" (LID), the goals of which are maintaining a landscape functionally equivalent to predevelopment hydrologic conditions, erosion control, control of concentrated flow and increased velocity, and minimal generation of nonpoint source pollutants. LID results in less surface runoff and less pollution routed to receiving waters. Principles of LID include:

- Maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge,

- Reducing the impervious cover created by development and the associated transportation network, and
- Managing runoff as close to the source as possible.

We understand that LID development practices that would maintain the function and value of the drainage features could also reduce local infrastructure requirements and could benefit energy conservation, air quality, open space, and habitat. Many planning tools exist to implement the above principles, and a number of recent reports and manuals provide specific guidance regarding LID. These principles can be incorporated into the proposed project design.

Natural drainage patterns must be maintained and/or restored to the extent feasible. Designs that use vegetated areas for stormwater management and infiltration on-site are preferable and are the most effective means of filtering sediment and pollution, and regulating the volume of runoff from land surfaces to adjacent washes.

Minimum-disturbance activities (such as preservation of vegetation and grade) protect and preserve the natural drainage system. They emulate and preserve the natural hydrologic cycle, moving stormwater slowly over large permeable surfaces to allow it to percolate into the ground. In addition, preservation and minimum-disturbance activities may be more cost effective than revegetation practices or structural controls, especially long-term. Design features of future development should be incorporated to ensure that runoff is not concentrated by the proposed project, thereby causing downstream erosion. Storm drain systems do not promote the same beneficial uses as a natural ecosystem.

In summary the environmental impact report should document the baseline conditions, describes and analyzes all feasible alternatives, describe measures used to avoid and minimize impacts, evaluate any potential impacts that can not be avoided, and propose effective mitigation.

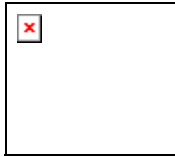
Thank you for the opportunity to comment on your project. If you have any questions regarding our comments, please contact me at (760) 241-7309, or e-mail me at gpourghasemi@waterboards.ca.gov.

Sincerely,



Ghasem Pour-ghasemi
Water Resource Control Engineer





LEED for New Construction v2.2 Registered Project Checklist

10/26/2007

Project Name: Stephen Sorensen County Park Phase III Gymnasium ☐ Community Center
Project Address: 16801 East Ave P, Lake Los Angeles, CA 93591

Yes	?	No		
8	1	5	Sustainable Sites	14 Points
Y			Prereq 1	Construction Activity Pollution Prevention Required
1			Credit 1	Site Selection 1
		1	Credit 2	Development Density <input type="checkbox"/> Community Connectivity 1
		1	Credit 3	Brownfield Redevelopment 1
		1	Credit 4.1	Alternative Transportation, Public Transportation Access 1
		1	Credit 4.2	Alternative Transportation, Bicycle Storage <input type="checkbox"/> Changing Rooms 1
1			Credit 4.3	Alternative Transportation, Low-Emitting <input type="checkbox"/> Fuel-Efficient Vehicles 1
1			Credit 4.4	Alternative Transportation, Parking Capacity 1
		1	Credit 5.1	Site Development, Protect or Restore Habitat 1
1			Credit 5.2	Site Development, Maximize Open Space 1
	1		Credit 6.1	Stormwater Design, Quantity Control 1
1			Credit 6.2	Stormwater Design, Quality Control 1
1			Credit 7.1	Heat Island Effect, Non-Roof 1
1			Credit 7.2	Heat Island Effect, Roof 1
1			Credit 8	Light Pollution Reduction 1
3		2	Water Efficiency	5 Points
1			Credit 1.1	Water Efficient Landscaping, Reduce by 50\square 1
		1	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation 1
		1	Credit 2	Innovative Wastewater Technologies 1
1			Credit 3.1	Water Use Reduction, 20\square Reduction 1
1			Credit 3.2	Water Use Reduction, 30\square Reduction 1
8	1	7	Energy <input type="checkbox"/> Atmosphere	17 Points
Y			Prereq 1	Fundamental Commissioning of the Building Energy Systems Required
Y			Prereq 2	Minimum Energy Performance Required
Y			Prereq 3	Fundamental Refrigerant Management Required
Note for EA1: All LEED for New Construction projects registered after June 26 th , 2007 are required to achieve at least two (2) points under EA1.				
4		6	Credit 1	Optimize Energy Performance 1 to 10
				10.5 \square New Buildings or 3.5 \square Existing Building Renovations 1
				14 \square New Buildings or 7 \square Existing Building Renovations 2
				17.5 \square New Buildings or 10.5 \square Existing Building Renovations 3
		4		21 \square New Buildings or 14 \square Existing Building Renovations 4
				24.5 \square New Buildings or 17.5 \square Existing Building Renovations 5
				28 \square New Buildings or 21 \square Existing Building Renovations 6
				31.5 \square New Buildings or 24.5 \square Existing Building Renovations 7
				35 \square New Buildings or 28 \square Existing Building Renovations 8
				38.5 \square New Buildings or 31.5 \square Existing Building Renovations 9
				42 \square New Buildings or 35 \square Existing Building Renovations 10
1	1		Credit 2	On-Site Renewable Energy 1 to 3
				2.5 \square Renewable Energy 1
				7.5 \square Renewable Energy 2
				12.5 \square Renewable Energy 3
		1	Credit 3	Enhanced Commissioning 1
1			Credit 4	Enhanced Refrigerant Management 1
1			Credit 5	Measurement <input type="checkbox"/> Verification 1
1			Credit 6	Green Power 1

continued ☐

4		9
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Materials □ Resources

13 Points

Y			Prereq 1	Storage <input type="checkbox"/> Collection of Recyclables	Required
			1 Credit 1.1	Building Reuse , Maintain 75 <input type="checkbox"/> of Existing Walls, Floors <input type="checkbox"/> Roof	1
			1 Credit 1.2	Building Reuse , Maintain 100 <input type="checkbox"/> of Existing Walls, Floors <input type="checkbox"/> Roof	1
			1 Credit 1.3	Building Reuse , Maintain 50 <input type="checkbox"/> of Interior Non-Structural Elements	1
1			Credit 2.1	Construction Waste Management , Divert 50 <input type="checkbox"/> from Disposal	1
			1 Credit 2.2	Construction Waste Management , Divert 75 <input type="checkbox"/> from Disposal	1
			1 Credit 3.1	Materials Reuse , 5 <input type="checkbox"/>	1
			1 Credit 3.2	Materials Reuse , 10 <input type="checkbox"/>	1
1			Credit 4.1	Recycled Content , 10 <input type="checkbox"/> (post-consumer <input type="checkbox"/> pre-consumer)	1
			1 Credit 4.2	Recycled Content , 20 <input type="checkbox"/> (post-consumer <input type="checkbox"/> pre-consumer)	1
1			Credit 5.1	Regional Materials , 10 <input type="checkbox"/> Extracted, Processed <input type="checkbox"/> Manufactured Regio	1
			1 Credit 5.2	Regional Materials , 20 <input type="checkbox"/> Extracted, Processed <input type="checkbox"/> Manufactured Regio	1
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1

10	2	3
----	---	---

Indoor Environmental Quality

15 Points

Y	Prereq 1	Minimum IAQ Performance	Required
Y	Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
1	Credit 1	Outdoor Air Delivery Monitoring	1
	Credit 2	Increased Ventilation	1
1	Credit 3.1	Construction IAQ Management Plan, During Construction	1
1	Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1
1	Credit 4.1	Low-Emitting Materials, Adhesives □ Sealants	1
1	Credit 4.2	Low-Emitting Materials, Paints □ Coatings	1
	Credit 4.3	Low-Emitting Materials, Carpet Systems	1
1	Credit 4.4	Low-Emitting Materials, Composite Wood □ Agrifiber Products	1
1	Credit 5	Indoor Chemical □ Pollutant Source Control	1
	Credit 6.1	Controllability of Systems, Lighting	1
	Credit 6.2	Controllability of Systems, Thermal Comfort	1
1	Credit 7.1	Thermal Comfort, Design	1
1	Credit 7.2	Thermal Comfort, Verification	1
1	Credit 8.1	Daylight □ Views, Daylight 75□ of Spaces	1
	Credit 8.2	Daylight □ Views, Views for 90□ of Spaces	1

Yes ? No

2		3
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Innovation Design Process

5 Points

1			Credit 1.1	Innovation in Design: Provide Specific Title	1
		1	Credit 1.2	Innovation in Design: Provide Specific Title	1
		1	Credit 1.3	Innovation in Design: Provide Specific Title	1
		1	Credit 1.4	Innovation in Design: Provide Specific Title	1
1			Credit 2	LEED® Accredited Professional	1

Yes ? No

Project Totals (pre-certification estimates)

69 Points

Certified: 26-32 points, **Silver:** 33-38 points, **Gold:** 39-51 points, **Platinum:** 52-69 points

Appendix B

Stephen Sorensen County Park Planning Study



Final

STEPHEN SORENSEN COUNTY PARK

Planning Study

Prepared for:
County of Los Angeles
Department of Public Works

April 2006



Final

STEPHEN SORENSEN COUNTY PARK

Planning Study

Prepared for:
County of Los Angeles
Department of Public Works

April 2006

707 Wilshire Boulevard
Suite 1450
Los Angeles, CA 90017
213.599.4300
www.esassoc.com

Oakland

Orlando

Sacramento

San Francisco

Seattle

Tampa

205237



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CHAPTER I

Introduction

A. Purpose of Study

This document is a Planning Study intended to outline the potential constraints of development at Stephen Sorensen County Park located near the unincorporated community of Lake Los Angeles in northern Los Angeles County, California (see **Figure I-1**). This document is intended to assist the County of Los Angeles, Department of Public Works (LACDPW or County) staff with the future planning at the site. The analysis assesses the following resources: biological resources, cultural resources, geologic hazards, hazardous materials, hydrology, land use, the local transportation network, and utilities (including septic leach field capacity).

B. Project Background

The park is located in the Lake Los Angeles community of unincorporated Los Angeles County. Lake Los Angeles got its name from a manmade lake that was fed by pumped groundwater. The artificial lake is no longer maintained and the lake bed has been dry many years. The 100-acre site is located at 16801 East Avenue P (approximately 15 miles east of Lancaster) and is owned by the County (see **Figure I-2**). An existing 3-acre park on the southern portion of the site was developed as Phase I of park development of this site. A Phase II, 12-acre expansion of the park is currently being developed in the southwestern portion of the site. In this 12-acre expansion, lighted basketball courts, baseball diamonds, and soccer fields are planned as well as additional parking. A small community building was also considered as part of Phase II, but it is now thought that this building would be combined into a future phase and possibly developed in concert with a library and possible gymnasium.

This Planning Study assesses the feasibility, constraints, and opportunities for the future full development of Stephen Sorensen County Park that would encompass the entire 100-acre site. Future development could include recreational fields, tennis courts, trails, the community building, a possible gymnasium, associated parking, and other public facilities.

C. Study Location

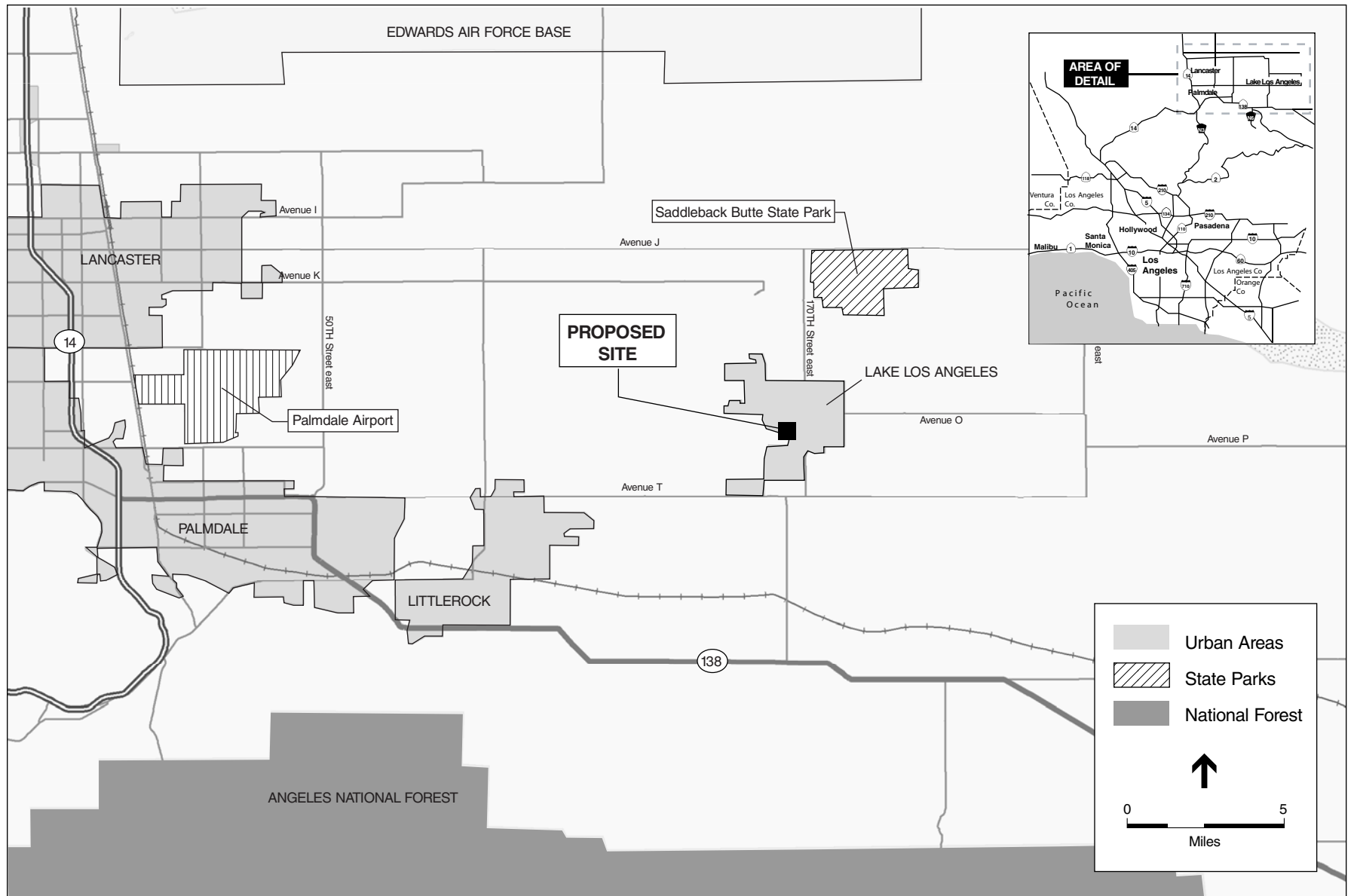
The 100-acre site is shown in **Figure I-1**. **Figures I-3** through **I-13** are photos of the site. In the south-easternmost portion of the site, recreational facilities have been constructed as part of the Phase I development. The Phase II expansion of the park under construction will expand upon the



SOURCE: GlobeXplorer, ESA 2005

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Figure I-1
Site Boundary



SOURCE: ESRI, ESA 2005

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Figure I-2
Vicinity of the Site



Figure I-3 - View of wash area with rubber rabbitbush and big sagebrush

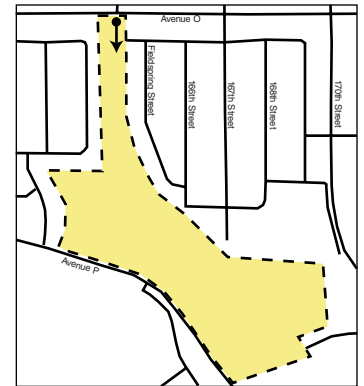


Figure I-4 - View of the Joshua tree woodland area

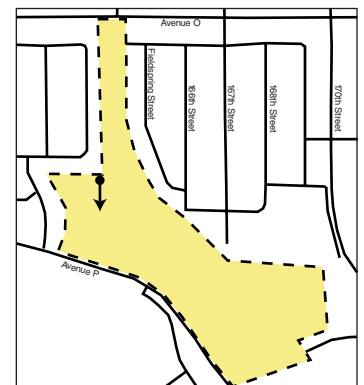




Figure I-5 - View of the rock outcrops within the eastern portion of the site

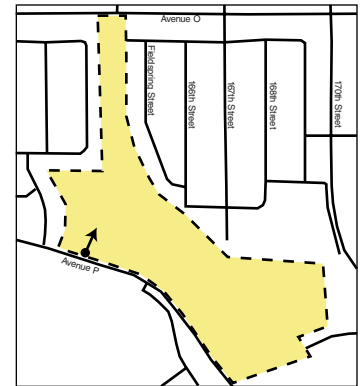


Figure I-6 - View of the Joshua tree woodland area with adjacent development in the background

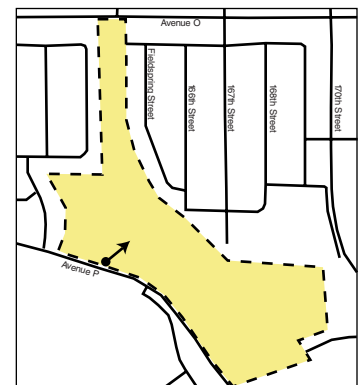




Figure I-7 - View of the disturbed area with cottonwoods in the background

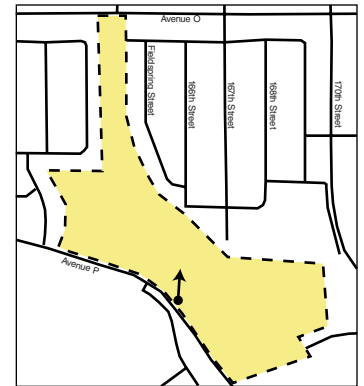


Figure I-8 - View of Lovejoy Springs with cottonwoods

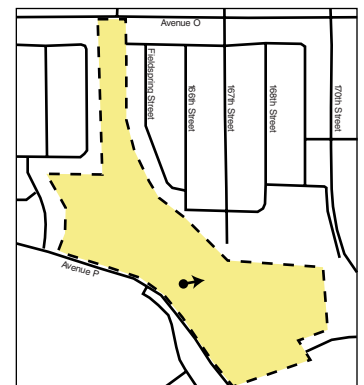




Figure I-9 - Drainage onto the site with concrete riprap

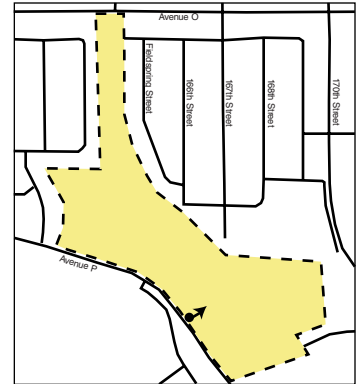


Figure I-10 - Invasive Species (*Arundo donax*) on site

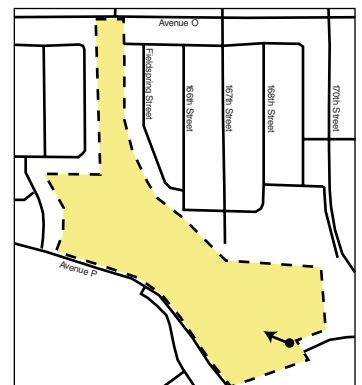




Figure I-11 - Invasive species tamarisk on site

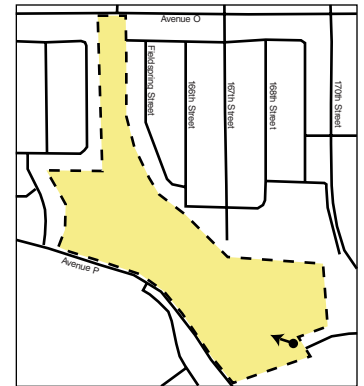


Figure I-12 - View of the Phase 2 construction area with willows in the foreground

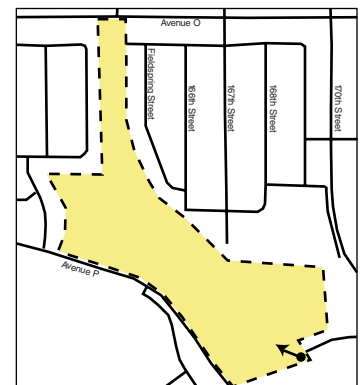
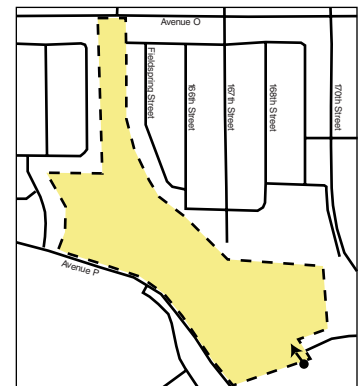




Figure I-13 - View of the willow riparian area



nucleus of the existing development. The remaining portions of the site are generally undeveloped with rock outcroppings to the west and east and a blue-line ephemeral wash that runs the length of the site from the northwest to the southeast. Land uses that surround the site are comprised of mostly single-family residences, commercial structures, and open space that contains rock outcrops and foothills. The site lies within Significant Ecological Area (SEA) No. 53 (Lovejoy Butte), according to the *Antelope Valley Areawide General Plan* (Antelope Valley Area-Wide Plan).

CHAPTER II

Biological Resources

A. Introduction

This chapter addresses potential constraints to future development of the site posed by sensitive biological resources, as well as opportunities for natural resource conservation.

B. Study Methods

The information for this chapter was obtained from a literature search and a reconnaissance-level site survey. The site is within the Lovejoy Butte U.S. Geological Survey (USGS) 7.5-minute quadrangle: most of the databases we accessed for the study use USGS quadrangles as a starting point. ESA biologists reviewed extant habitats, potentially occurring “special-status” species and higher-order ecosystem factors such as wildlife corridors. “Special-status” is a term of art which acknowledges recognized rarity or vulnerability to various causes of habitat loss or population decline. Some of these receive specific protection defined in federal or state endangered species legislation, but others have been designated as special-status on the basis of expertise of state resource agencies or organizations. The presence of such species can be a constraint to some uses of the site.

B.1 Records Search

Sources reviewed included:

- California Native Plant Society’s (CNPS’s) Inventory of Rare and Endangered Plants of California (Skinner and Palvik, 2004);
- California Natural Diversity Database (CNDDDB) records search for the Lovejoy Butte quadrangle and eight adjacent quadrangles (Littlerock, Alpine Butte, Hi Vista, Adobe Mountain, El Mirage, Mescal Creek, Valyermo, and Juniper Hills) [California Department of Fish and Game (CDFG), 2005];
- The Draft *West Mojave Plan Environmental Impact Report and Statement* [Bureau of Land Management (BLM), 2005]. The *West Mojave Plan* is a comprehensive strategy to conserve and protect Mohave ground squirrel and desert tortoise as well as nearly 100 other sensitive plants and animals and the natural communities that they are a part of and provides a streamlined program for complying with the requirements of the California and federal Endangered Species Acts (BLM, 2005);

- California Gap Analysis Project (http://www.biogeog.ucsb.edu/projects/gap/gap_data2.html);
- County of Los Angeles Significant Ecological Area Program (<http://planning.co.la.ca.us/SEA>); and
- ESA Biological Resources file information and existing literature (see citations).

B.2 Field Survey

ESA biologist Steven Esselman conducted the site reconnaissance on November 4, 2005 between the hours of 0800 and 1400. Weather conditions at the 0800 hour were 61-degrees Fahrenheit (⁰F), 0 to 10 mile-per-hour (mph) winds, 0 to 10 percent cloud cover, ground surface dry, and visibility judged good. The purpose of the reconnaissance was to ground-truth remote data derived from aerial photography, as well as vegetation mapping developed for the California Gap Analysis Project. Also, plant and wildlife species observed during the survey and their sign (e.g., scat, tracks, shell fragments, etc.), and nonliving habitat elements such as dens, burrows and nest structures, provide additional evidence to help predict the presence of sensitive resources.

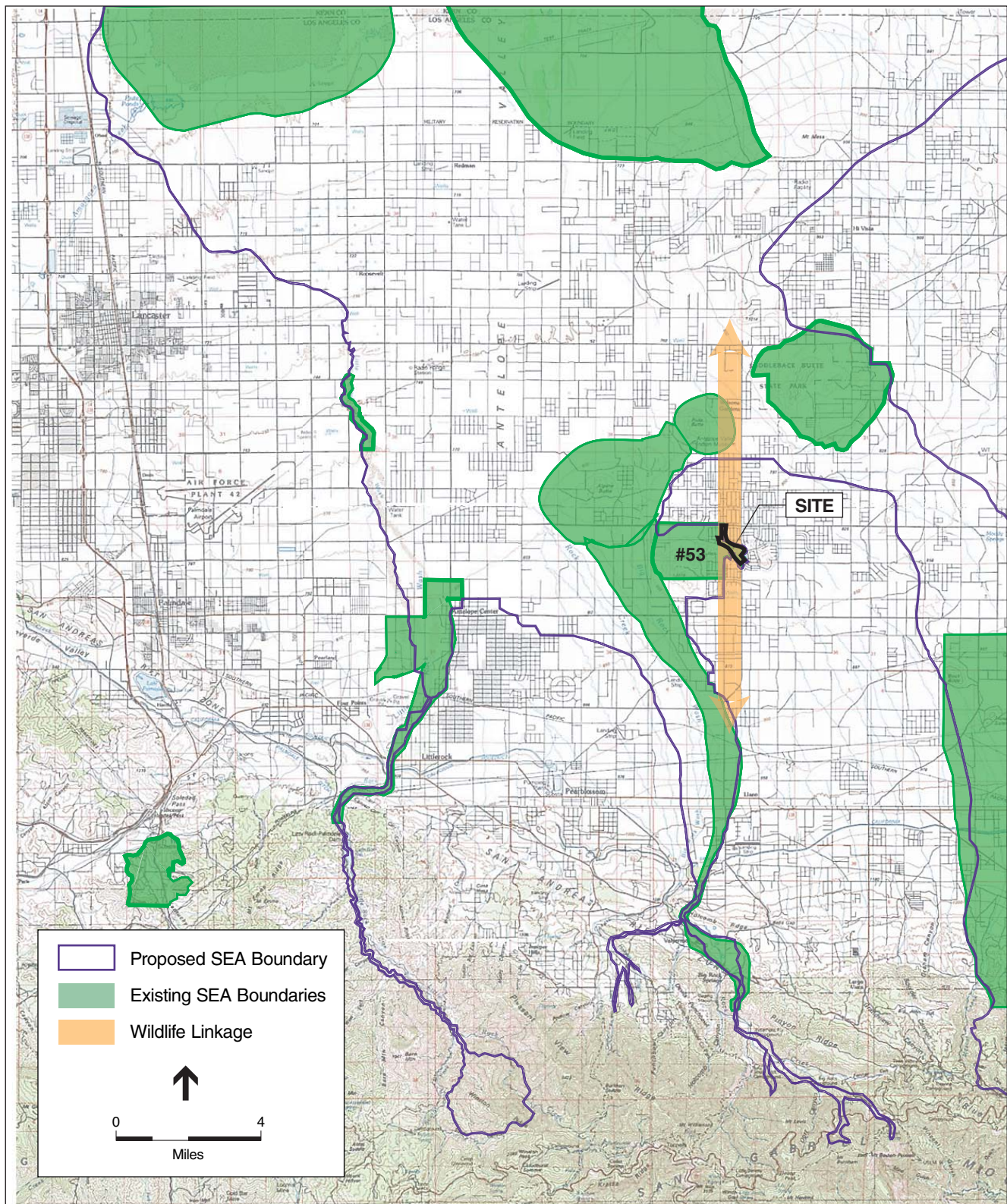
C. Existing Environment

As reported in County of Los Angeles Significant Ecological Area (SEA) program, this portion of the Antelope Valley, east of the cities of Palmdale and Lancaster and along Little Rock and Big Rock Creeks, connects U.S. Forest Service land northward across the Valley floor to the to the southeastern slopes of Saddleback Butte. Most of the land within this segment is open and undeveloped, provides a terrestrial linkage across the Valley, and supports many regional biological values. The buttes (Lovejoy, Alpine, Piute, Black and Saddleback), form most of the topographical relief, offering unique habitats in the otherwise level desert floodplain, providing nesting, roosting, denning, and refuge sites, and perches for birds of prey. The location of the SEAs and their relation to the site and regional wildlife movement are shown in **Figure II-1**.

C.1 Vegetation

The site's soils are aridosols (i.e., a soil that is typically saline or alkaline with very little organic matter, found in arid regions) that are well-drained, light in color, and low in organic matter; erosion has removed most fine particles from the surface layers, leaving behind a layer of pebbles and small rocks that is often referred to as desert pavement.

Regionally, the site is considered Mojave Creosote Bush Scrub, described by Holland (1986) as the basic creosote shrub of the Mojave Desert: shrubs, 0.5-3m tall, widely spaced, usually with bare ground between. Growth occurs during spring (or rarely in summer or fall) if rainfall is sufficient. Growth is prevented by cold in winter and limited by drought in other seasons. Many species of ephemeral herbs may flower in late March and April if the winter rains are sufficient.



SOURCE: Toposcout, 1997; Forma Systems, September 8, 2000
Draft West Mojave Plan

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Figure II-1
Antelope Valley Significant Ecological Areas
Existing and Proposed Boundaries

Where it remains undeveloped, the site also comprises a mixture of high to low quality Joshua tree (*Yucca brevifolia*) woodland (within the western portion of the site), and stands of big sagebrush (*Artemisia tridentata*), rabbitbrushes (*Chrysothamnus* spp.), cheesebush (*Hymenoclea salsola*), and bush buckwheat (*Eriogonum fasciculatum*). **Figure II-2** displays this mixture of habitats at the local scale.

Within a manmade, unlined channel (see Riparian in **Figure II-2**) that facilitates the drainage of Lake Los Angeles to the southeast into Lovejoy Springs, another vegetation type has partially re-established itself: Mojave Riparian Forest, characterized by Fremont cottonwood (*Populus fremontiia*) and a variety of willows (*Salix* spp.). Lovejoy Springs is an onsite natural spring that ceased running after the 1952 Tehachapi earthquake (Discovery Works, 2004). To the north of the manmade channel, invasive giant reed (*Arrundo donax*) and tamarisk (*Tamarix gallica*) are present; tamarisk is also present within the manmade channel. Both species are non-native and considered invasive plant pests that provide little value to wildlife.

Beside the artificial drainage, there is one main southeast to northwest trending ephemeral wash that runs the length of the site from Lovejoy Spring toward the northern finger of the site where it continues to the north and water flows offsite to the north through a culvert under Avenue O.

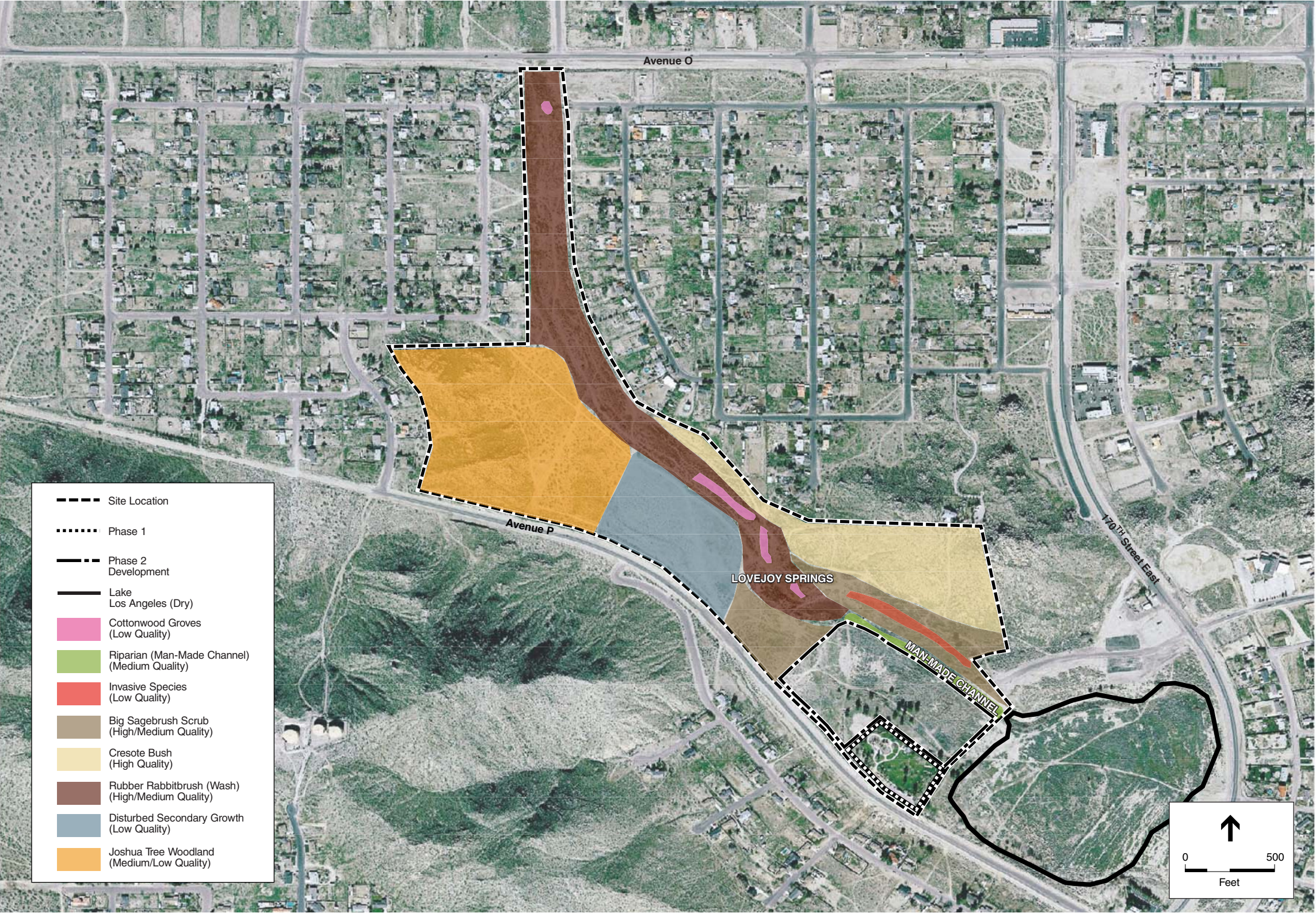
C.2 Wildlife

Wildlife observed during the reconnaissance were species typically encountered where natural and disturbed habitats are adjacent to each other in this part of Los Angeles County: red-tailed hawk (*Buteo jamaicensis*), California quail (*Callipepla californica*), California ground squirrel (*Otospermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), mourning dove (*Zenaida macroura*), cactus wren (*Campylorhynchus brunneicapillus*), western scrub-jay (*Aphelocoma californica*), and common raven (*Corvus corax*).

Desert shrub habitats have a relatively low species diversity (Burk 1977), but support a variety of wildlife species. Presence of standing water in winter and growth of herbaceous plants in spring, provide foraging areas and food for species in these seasons (Mayer and Laudenslayer, 1988).

Other species that could occur on the site include common “generalists” like European starling (*Sturnus vulgaris*), rock dove (*Columba livia*), and house mouse (*Mus musculus*). Within the various scrub communities at the site, a number of snake species including the glossy snake (*Arizona elegans*), long-nosed snake (*Rhinocheilus lecontei*), gopher snake (*Pituophis melanoleucus*), and common kingsnake (*Lampropeltis getula*) could occur. Lizards such as the western whiptail (*Cnemidophorus tigris*), side-blotched lizard (*Uta stansburiana*), and long-nosed leopard lizard (*Gambelia wislizenii*) may be found in these scrub habitats as well.

Birds that could utilize the site include the California horned lark (*Eremophila alpestris*), sage sparrow (*Amphispiza belli*), western kingbird (*Tyrannus verticalis*), and northern harrier (*Circus cyaneus*). Other potential resident bird species include the greater roadrunner (*Geococcyx*



SOURCE: GlobeXplorer, ESA 2005

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Figure II-2
Habitat Type and Quality

californianus), California towhee (*Pipilo crissalis*), loggerhead shrike (*Lanius ludovicianus*), Brewer's sparrow (*Spizella breweri*), western meadowlark (*Sturnella neglecta*), and great horned owl (*Bubo virginianus*).

Common mammalian species likely inhabiting scrub communities at the site include the deer mouse (*Peromyscus maniculatus*), desert pocket mouse (*Chaetodipus penicillatus*), cactus mouse (*Peromyscus eremicus*), desert woodrat (*Neotoma lepida*), Merriam's kangaroo rat (*Dipodomys merriami*), desert cottontail (*Sylvilagus audubonii*), desert kit fox (*Vulpes macrotis*), and coyote (*Canis latrans*). In addition, desert scrub communities provide foraging habitat for several species of bats known to occur in the project region such as the California myotis (*Myotis californicus*), pallid bat (*Antrozous pallidus*), and greater western mastiff bat (*Eumops perotis californicus*). Crevices in trees, rock outcrops, and structures may provide roosts for these species. Migratory bat species, such as the Mexican free-tailed bats (*Tadarida brasiliensis*) and hoary bats (*Lasiurus cinereus*) also may utilize these habitats during spring and fall migration.

The occurrence of amphibian species at the site is primarily limited to seasonal ponding within the wash. This area could be considered to provide short-term habitat, but not breeding habitat, for local amphibians such as the ubiquitous western toad (*Bufo boreas*) and Pacific chorus frog (*Hyla regilla*).

Joshua trees provide nest sites, song perches, and lookout posts for birds such as the cactus wren and Scott's oriole (*Icterus parisorum*), and cover for lizards such as the desert night lizard (*Xantusia vigilis vigilis*) and desert spiny lizard (*Sceloporus magister*). These lizards also utilize downed Joshua tree branches and other woody debris for shelter.

D. Special-Status Species

There are over three dozen special-status plants or animals with the potential to occur in the vicinity of the site, either as residents or transient animals from more intact habitats to the west and south. Based on known records from the CNDDB, habitat affinities of the species and professional judgment, **Table II-1** lists those most likely to be issues in planning the future development of the site.

E. Wetlands

Discharges into "waters of the U.S." are regulated under Section 404 of the Clean Water Act, and impacts to state waters under Fish and Game Code Sections 1600-1616. Collectively, these are termed "jurisdictional wetlands." A formal delineation of jurisdictional wetlands was not within the scope of this work. However, based on experience with wetlands in the Antelope Valley, areas that could be considered wetlands include those labeled rubber rabbitbrush and cottonwood groves on **Figure II-2**.

**TABLE II-1
SPECIAL-STATUS SPECIES AND HABITAT WITH POTENTIAL TO OCCUR WITHIN
THE VICINITY OF THE SITE**

Species	Listing Status (USFWS CDFG CNPS)	Likelihood of Occurrence	Comments
Plants			
<i>Plagiobothrys parishii</i> Parish's popcorn-flower	--/--/1B	Moderate	Found in wetland areas associated with Joshua tree woodland.
Animals			
<i>Toxostoma lecontei</i> Le Conte's thrasher	--/SC/--	High	Found in open desert scrub, alkali desert scrub, and desert succulent scrub.
<i>Athene cunicularia</i> Burrowing owl	--/SC/--	High	Found in open, dry grasslands, agricultural and range lands, and desert habitats often associated with burrowing animals.
<i>Buteo swainsoni</i> Swainson's hawk	--/ST/--	High	Found in open grasslands and desert-like habitats.
<i>Gopherus agassizii</i> Desert tortoise	FT/ST/--	Moderate	Found in desert environments of southern California, especially in creosote bush scrub. Substantial development around the site may preclude the occurrence of this species.
<i>Onychomys torridus Ramona</i> Southern grasshopper mouse	--/SC/--	Moderate	Found in the deserts of southern California.
<i>Spermophilus mohavensis</i> Mohave ground squirrel	--/ST/--	Moderate	Found exclusively in the western Mojave Desert.

Status Codes:

Federal (USFWS)

FE □ federally endangered

FT □ federally threatened

State (CDFG)

SE □ state endangered

ST □ state threatened

SC □ state species of special concern

CNPS

1B □ plants rare, threatened, or endangered in the state and elsewhere

3 □ plants which more information is needed

SOURCE: CNDDB, 2005 and Skinner and Pavik, 2004.

F. Existing Conservation Plans □ General Plans

The site is not within any Natural Community Conservation Plan (NCCP) and/or Habitat Conservation Plan (HCP) at this time. However, the site is a part of the proposed *West Mojave Plan* (BLM, 2005). The *West Mojave Plan* is the largest HCP ever developed in the United States and encompasses 9.3 million acres in San Bernardino, Kern, Los Angeles, and Inyo counties. It has been jointly released, along with the Final Environmental Impact Statement and Environmental Impact Report EIS/EIR, by the U.S. Bureau of Land Management (BLM), the County of San Bernardino, and the City of Barstow.

The *Antelope Valley Areawide General Plan* designates Lovejoy Butte within Significant Ecological Area (SEA) No. 53, which is adjacent to the site (County of Los Angeles, 1986). An SEA is a County of Los Angeles designation; therefore, is not a NCCP or a HCP. The *Antelope Valley Areawide General Plan* states that Joshua tree woodland and creosote bush scrub vegetation and the desert buttes in the area are critical habitat to many birds of prey (i.e., raptors) and large mammals (County of Los Angeles, 1986).

G. Potential Constraints and Opportunities

The presence of species listed under the state or federal endangered species acts (Swainson's hawk, desert tortoise, and Mojave ground squirrel) are the most obvious biological considerations for the future of the site. Actions that might harm or harass such species or reduce their habitat generally require extensive consultations with the resource agencies (U.S. Fish and Wildlife Service and the California Department of Fish and Game). However, some land uses such as park and recreation areas, designed to fit within natural landscape and use native vegetation, can co-exist with listed species; properly planned, some open space uses can actually enhance habitat and benefit the species.

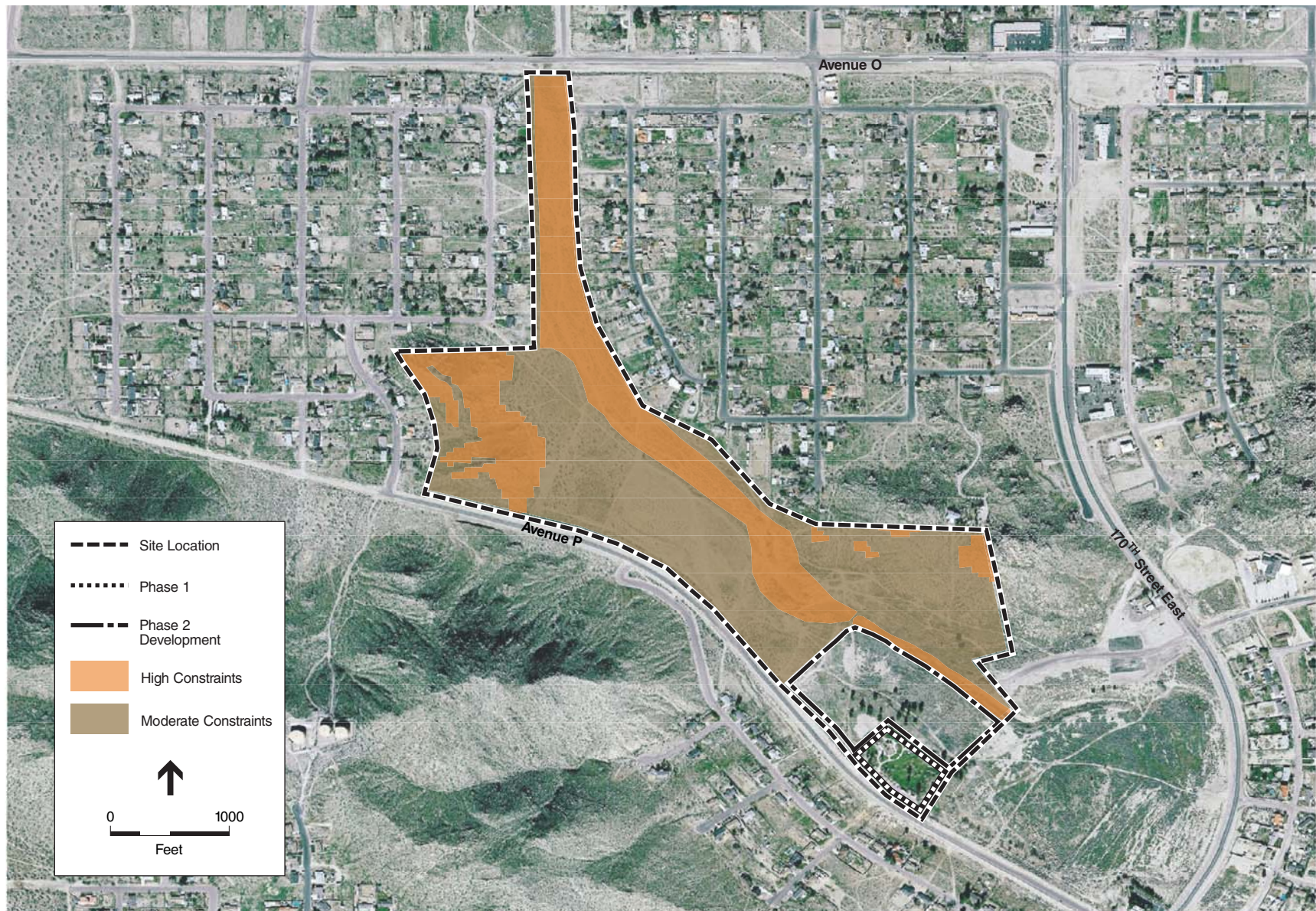
Wetlands are the next level of constraint. Any disturbance to wetlands under state or federal jurisdiction requires permits and agreements from the jurisdictional agencies (California Department of Fish and Game, the U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). The processes can be time consuming, but are generally not as severe in their restrictions as compliance with the endangered species acts.

With these two determinants in mind, **Figure II-3** maps the portions of the site with high or moderate constraints due to the presence of sensitive or regulated natural resources. Definitions of high and moderate constraints used for this analysis are listed below:

- **High Constraint** is defined as the most intact portions of the habitats most likely to support listed species (with some value given also to habitat diversity for a wider suite of species), or jurisdictional wetlands.
- **Moderate Constraint** includes portions of the site that could satisfy goals associated with the County of Los Angeles SEA. Activities which might affect the integrity of the SEA and its wildlife corridor are not subject to additional permitting, but require a more detailed analysis.

G.1 CEQA, Permit and Survey Considerations

In High Constraint areas, any change in vegetative cover (landscaping, for example) or ground disturbance (placing a culvert, building pad, access roads, etc.) is an action subject to analysis under the California Environmental Quality Act (CEQA). CEQA Guidelines Section 15380(a) provides regulatory guidance for biological resources, and potential project impacts to species on the state or federal endangered or threatened species lists would be considered potentially significant. Impacts to special-status species not protected by the endangered species acts would



SOURCE: GlobeXplorer, ESA 2005

Stephen Sorensen County Park Planning Study . 205237

Figure II-3
Biological Constraints

be considered significant under certain circumstances. For example, removal of breeding habitat for a bird such as Le Conte's thrasher, which is not formally listed but for which reduced breeding habitat has been identified as a reason for population decline, could be considered potentially significant.

As the CEQA process moves forward, the likelihood of significant impacts is determined either by surveys to determine presence (or absence) or by simply predicting that the species will occur based on suitability of habitat. For this site, proving absence for desert tortoise and Mohave ground squirrel requires that biologists apply strict survey "protocols" which can be take time and can be costly. For example, the portion of the site at the western end of the site labeled High Constraint in **Figure II-3** (see also **Figure II-4**) and considered potential Mohave ground squirrel habitat, would be surveyed several times over a period of four months in the spring, at a cost of about \$5,000 per acre. If present, the area would have to be avoided or mitigated by acquiring compensatory habitat elsewhere.



Figure II-4. Mohave Ground Squirrel and Desert Tortoise Habitat at the Sorenson Site.

The CEQA analysis would also determine what other permits would be needed, and adopt as mitigation measures the expected terms of these permits. Chief among these are the wetlands permits mentioned above. The permit process for wetlands begins with a wetland survey which delineates the extent of wetlands on site and estimate how much of their surface area would be impacted and how hydrological function might be affected. The delineation costs would be much less than ground squirrel surveys, but the length of time would be much the same, since the regulatory agencies may elect to “verify” the delineation and the process does not move forward without the verification. Permit terms may require off-site creation or acquisition of wetlands the goal is no net loss), but in this situation might be as straightforward as removing all non-native vegetation in portions of the drainage not affected.

CHAPTER III

Cultural Resources

A. Introduction

This chapter addresses potential constraints to future development of the site posed by cultural resources at the site. The *Cultural Resources Survey for Stephen Sorensen Park Expansion, Los Angeles County, California* (Lloyd, 2005) prepared by Applied Earthworks (AEW).

B. Study Methods

B.1 Records Search

On August 24, 2005, AEW requested a record search from the South Central Coastal Information Center at California State University, Fullerton to identify previously recorded cultural resources or prior studies conducted within a 0.25 mile radius of the study area. In addition to reviewing all recorded archaeological sites and cultural resource reports, the Information Center staff also checked the listings of the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historic Places, the National Register of Historic Places (NRHP), the California State Historic Resources Inventory, and the City of Los Angeles Cultural Monuments.

B.2 Field Survey

AEW completed an intensive pedestrian survey of the 100-acre project area on September 21-23, 2005. The survey was accomplished by a pair of archaeologists walking parallel transects spaced 10–15 meters (32–49 feet) apart. Because dense vegetation obscured portions of the area surveyed, cut banks, rodent holes, and all granite bedrock outcrops were closely examined for evidence of cultural materials and features. Where feasible, vegetation was scraped away by trowel to expose the ground surface.

C. Existing Environment

This section describes the prehistoric and ethnographic cultural setting of the project area.

C.1 Prehistory and Archaeology

Although archaeologists first took interest in the western Mojave Desert in the 1930s, little systematic research was done in the region prior to the 1960s. Efforts since the 1960s have led to a prehistoric cultural chronology that can be divided into seven periods distinguished by paleoclimatic variations and differences in adaptive strategies (Warren, 1984).

C.1.1 Paleoindian Period (prior to 10,000 B.P.)

The earliest archaeological evidence of cultural activity in the western Mojave Desert occurs during the terminal Pleistocene (i.e., from two million to 11 thousand years ago), a period marked by rising temperature and precipitation and unstable climate. Although evidence of a Paleoindian occupation in the region is sparse, marked by a single Clovis point recovered from the foothills of the Tehachapi Mountains (Glennan, 1971b), the valley was likely an ideal place for the exploitation of late Pleistocene megafauna. Clovis points are sharp fluted projectile points. Recent research at Searles Lake basin in the eastern Mojave Desert has identified geoglyphs and artifact concentrations dating back 11,000 years before present (B.P.) (Barna, 2004). Archaeologists hypothesize that the earliest occupants of the region led a foraging lifestyle focused around lakeshore or wetland environments (Davis, 1978; Moratto, 1984). Population density was presumably quite low. The tools they used included large lanceolate (i.e., lance-shaped) and fluted points for hunting game, as well as crescents, graters, scrapers, choppers, perforators, and numerous small formalized and informal flake tools (Davis, 1978). Crescents and graters are flaked stone tools defined by particular morphological characteristics. Crescents are crescent shaped tools with one inward curving margin and one outward curving margin. A grater is a flaked stone tool with a patterned extension used for engraving on a hard material. Ground stone implements were rare, indicating that processed seeds or nuts did not play a significant dietary role.

C.1.2 Lake Mojave Period (10,000–7,000 B.P.)

Most of the early material identified within the valley dates to the Lake Mojave Period, when the climate was much drier than the preceding period, with intermittent moist episodes. Numerous sites dating to this period have been found within the southwestern Great Basin and the northern Mojave Desert, suggesting a considerable population increase during this time. Local sites from this interval include CA KER 322, on the northwestern fringe of Rogers Lake (Peak, 1974; Peak, 1976; Sutton, 1979), and CA KER 760, northeast of Rogers Lake (Robinson, personal communication 1980 in Sutton, 1988). KER 322 and KER 760 are both approximately 30 miles north of LAN-192. Lake Mojave artifacts include large percussion-flaked foliate knives or points, Lake Mojave and Silver Lake points, stone crescents, and a wide variety of scrapers, graters, and perforating tools. Ground stone implements continue to be rare. Sutton (1988:30) noted that much of Antelope and Fremont valleys may have been covered by Pleistocene Lake Thompson. Because the relief in the valley is slight, extensive marshlands may have ringed the lake. Such marshes are among the most productive of habitats, and Davis (1978) argued that these wetlands would have attracted early occupants. Thus, it is presumed that the adaptive strategy was one of generalized hunting and gathering focused on the exploitation of wetland resources.

C.1.3 Pinto Period (7,000–4,000 B.P.)

A generalized hunting and gathering strategy continued into the Pinto Period; however, it underwent marked changes with the onset of greater aridity. Population decreased in response to variable and unstable climatic conditions and a decrease in permanent wetland habitats beginning in the mid-Holocene. This period corresponds to Antevs' (1953) Altithermal (i.e., hot and dry), although recent research suggests that in the Antelope Valley this aridity was punctuated by wet episodes (Grayson, 1993; Mehringer, 1986). Sites dating to this period tend to be small temporary seasonal camps located near streams and seasonal water sources. They lack developed middens but contain a diverse toolkit consisting of Pinto projectile points, other flaked stone tools, and ground stone milling slabs and hand stones. The appearance of milling tools indicates an increased reliance on seeds and nuts from the scrub and chaparral plant communities as wetland resources diminished.

C.1.4 Gypsum Period (4,000–1,500 B.P.)

The Little Pluvial episode occurs between 5,000 and 2,000 B.P., marking a period of increased precipitation that intensified every thousand years until ca. 1,900 B.P. The Gypsum Period, a prehistoric cultural chronology period, loosely coincides with the Little Pluvial episode, a paleoclimatic period. Modern vegetation and climate were well established by 4300 B.P., and mesquite trees, oaks on the valley margins, and piñon were readily available. The mortar and pestle were introduced to process mesquite pods, acorns, pine nuts, yuccas, and agaves. The archaeological record is marked by the appearance of large village sites reflecting a transition from seasonal migration to year-round or semisedentary settlements (Sutton, 1988). The presence of coastal marine shell artifacts (e.g., Olivella beads) and Coso obsidian indicate that long distance exchange systems were in place. Milling tools of various types dominate the artifact assemblages; diagnostic flaked stone artifacts include Humboldt, Elko, Gypsum, and Rose Spring projectile points.

C.1.5 Rose Spring/Saratoga Springs Period (1,500–800 B.P.)

This period is marked by moderate climatic conditions interrupted by severe drought at 1,000-900 B.P. and again at 500 B.P., which is outside of the Rose Spring/Saratoga Springs Period. Adaptive strategies remain similar to the Gypsum Period, evinced by large village sites with deep middens reflecting a subsistence strategy focused on hunting and gathering and a continuation of trade networks with coastal and other outside groups (Moratto, 1984:423; Sutton, 1981:217). The biggest difference from the preceding period is the replacement of the atlatl, or spear thrower, by the bow and arrow. Projectile points diagnostic of this period include Rose Spring and Cottonwood points (i.e., projectiles). Also prevalent are stone beads and schist (i.e., medium-grained to coarse-grained metamorphic rocks) and steatite (i.e., variety of talc having a soapy feel) ground stone artifacts reflecting the development of a regional stone trade. Schist and steatite stone workshops have been identified at habitation sites along Amargosa Creek west of Palmdale (Earle, 2004). The end of the period is marked by a shift away from obsidian importation and an increased use of local cryptocrystallines. Earle (2004) suggests that changes in

regional networks of raw material exchange may be associated with a drought episode (circa 850-650 B.P.) and the migration of Numic-speaking populations out of southeastern California.

C.1.6 Late Prehistoric Period (800–300 B.P.)

Adaptive strategies of the Rose Spring/Saratoga Springs Period continued during the Late Prehistoric Period. With the amelioration of climatic conditions and an increase in precipitation circa 600 B.P., population increased and subsistence practices featured more intensive exploitation of a variety of both large and small mammals and some fish. The number of special purpose sites appears to increase, use of Coso obsidian¹ declines, and coastal trade items, particularly shell, increase. Use of Rose Spring and Cottonwood points continues during this period, while Desert Side-notched types are also introduced. Late period sites in the Antelope Valley are distinguished from other late period sites in the southern Mojave Desert by their general lack of pottery. Moratto (1984) and others argue that this suggests that the southwestern Hakataya influence so prevalent along the Mojave River valley was relatively minor in Antelope Valley because trade between the coast was well established. Interestingly, however, a surprising number of ceramic shards have been found at CA LAN 192 and other sites in the buttes (Earle, 2004). Additional study of these shards is necessary to determine their type. As Earle (2004) points out, their presence, along with the numerous shell beads, may reflect the existence of a coastal trans-Colorado trade route through the Antelope and the Mojave River valleys. Alternatively, the pottery may be of Numic origin, suggesting affiliation with Numic speaking groups.

C.1.7 Ethnographic Period (300 B.P. to present)

The western Mojave Desert was occupied by at least five groups of Shoshonean speakers at the time of first contact with Europeans: four from the Takic family of Shoshonean speakers and one from the Numic family. With the development of the Franciscan Mission system, numerous Serrano people were relocated to the missions between 1800 and 1820. Earle (AVIM, n.d.) suggests that small Numic-speaking groups of Chemehuevi-Southern Paiute affiliation migrated into the western Mojave Desert from the east and settled across the valley and the San Gabriel Mountains from the 1840s to as late as 1890.

C.2 History

The first Europeans to enter Antelope Valley were Spanish soldiers and missionaries exploring the interior of Alta California in the 1770s. Alta (or Upper) California is the term used by the Spanish (and Mexicans) for modern day California. This is contrasted with Baja (Lower) California. In 1772, Captain Pedro Fages passed through the valley while searching for mission deserters; his expedition took him through the Tejon Pass and ultimately into the San Joaquin Valley. Four years later, Father Francisco Garces traveled through Antelope Valley along the

¹ Volcanic glass that comes from the Coso volcanic field. There is a chemical test (termed XRF sourcing) which will tell us exactly which obsidian flow a particular piece came from. It is very useful in tracking trade routes, resource access, etc. Coso is one of the major sources for Southern California.

Mojave Indian trail. California Historic Monument No. 130 in Rosamond marks the location where the Franciscan friar stopped at Willow Springs (Tipton, 1988). Trappers such as Jedediah Smith and Kit Carson journeyed through Antelope Valley in the 1820s and were followed by John Fremont, who explored the region in 1844 (Palmdale City Library, 2004).

California's accession to the Union in 1850 led to several infrastructural developments in the region. Established in 1848, Fort Tejon protected an important point along the north–south wagon route and warded off Indian attacks in the area. Willow Springs became a stage stop in 1860 (Tipton, 1988), and a telegraph line connecting San Francisco and Los Angeles was strung through the Mojave Desert that same year (County of Los Angeles Public Library, 2000). Nevertheless, Antelope Valley remained largely undeveloped. It was not until 1876, when the Southern Pacific Railroad completed its line through the valley and stations were established at Lancaster, Alpine (Palmdale), and Acton, that more permanent settlements took hold (Palmdale City Library, 2004).

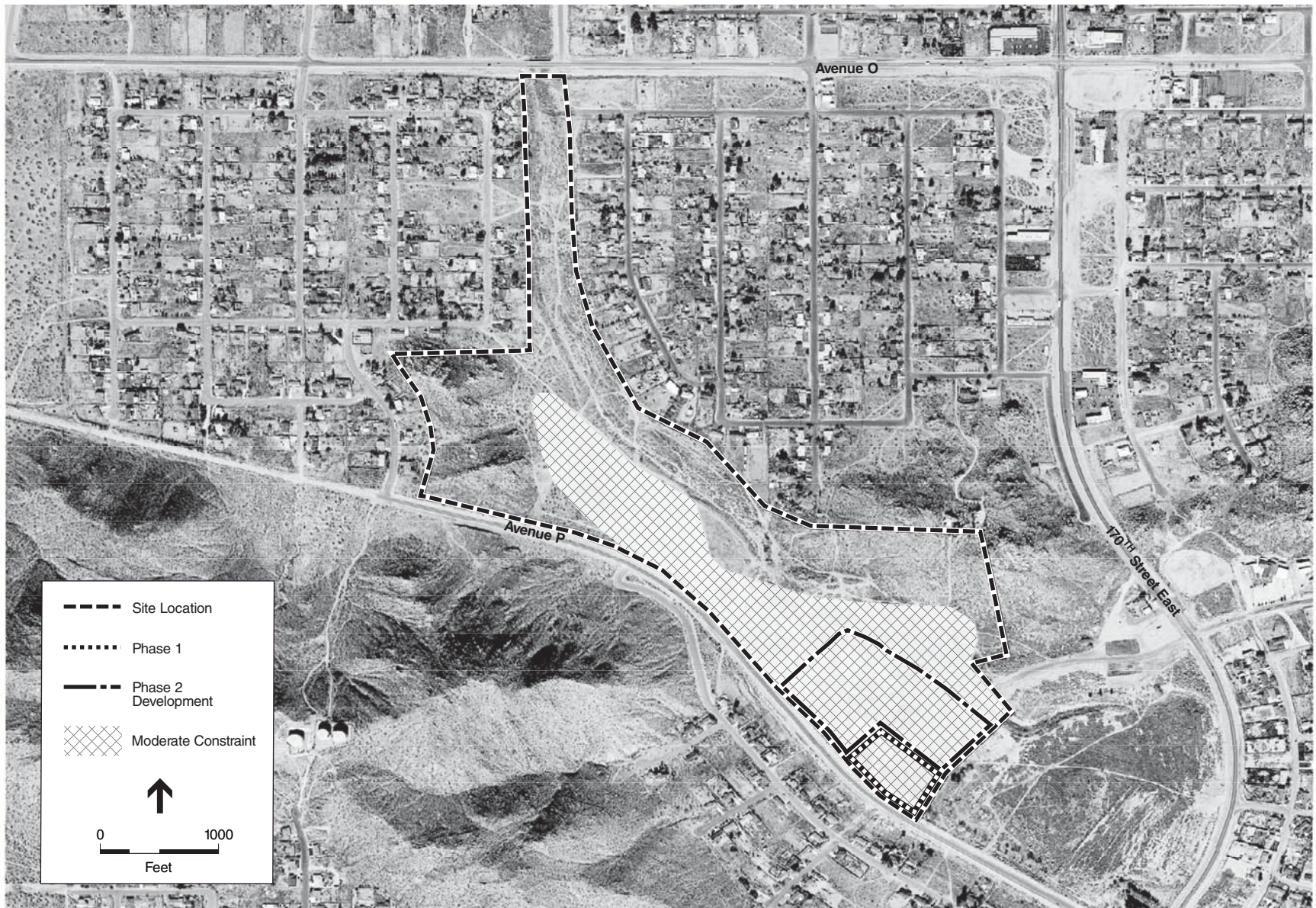
Like most of California, the supply of water has been the limiting factor for growth in the Mojave Desert region. Lovejoy Springs no doubt provided at least sufficient water for agricultural purposes, since early settlers had constructed a dam and small irrigation system by 1911 (Johnson, 1911). The reservoir also supported cattle ranching (Padon and Love, 2004). After the 1952 Tehachapi earthquake, however, the spring no longer flowed, and water was transported from a well to the south (Leighton and Cotton, 1967). Large-scale development came to the area in 1968 with the planned community of Lake Los Angeles. A large artificial lake (Lake Los Angeles; see **Figure III-1**) was constructed as part of the development, although it dried up in 1981.

Lake Los Angeles currently serves as a home to commuters working in the surrounding area, including Edwards Air Force Base, located about 30 miles north. The Antelope Valley Indian Museum is located in the town, and numerous episodes of the long-running television series *Bonanza* were filmed at nearby Saddleback Butte State Park.

D. Findings

D.1 Records Search

The records search revealed that eight previous archaeological investigations have been documented within or adjacent to the study area and have reports on file with the Information Center. Two of the reports (Stickel and Weinman-Roberts, 1979; Sutton, 1988) consist of cultural overviews that include portions of the Antelope Valley. Two of the studies (Cannard, 2003; Love, 1992) document parcels located within the study area but outside of the current project area. The remaining four projects (Padon and Love, 2004; Price et al., 2005; Robinson, 1994; Toney, 1968) all focus on the large prehistoric site CA LAN 192. Five additional studies (for which there are no formal reports on file) have been conducted at CA LAN 192 [Archaeological Survey Association (ASA), 1954; Love, 1989; Love, 1990; Love, 1992; Robinson, 1996], which is located on the southeastern portion of the site including the Phase I and II area.



SOURCE: GlobeXplorer, County of Los Angeles 2005

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Figure III-1
Cultural Constraints

D.2 Cultural Resources Survey

D.2.1 Previously Recorded Sites

D.2.1.1 CA LAN 192

Located on the project site, CA LAN 192 is a large prehistoric site located adjacent to a series of natural springs (Lovejoy Springs) which are now dry. As detailed by Padon and Love (2004:4–8), archaeological investigations of various kinds have been performed at CA LAN 192 since at least the 1920s, when a private collector made the first recorded artifact collections from the site.

Projectile points, ceramics, and other materials collected at that time currently are stored at the Santa Barbara Museum of Natural History. Subsequent surveys were conducted in 1954, 1968, 1989, 1990, and 1993. On behalf of the Los Angeles County, Department of Parks and Recreation, Beth Padon performed an archaeological survey of the proposed Stephen Sorensen Park Phase II expansion area (Padon and Love, 2004). As part of that investigation, she summarized the history of archaeological studies and described the major disturbances that had impacted the site, estimating that as much as 85 percent of the site may be destroyed (Padon and Love, 2004:16). Nonetheless, the survey revealed numerous artifacts on the site surface (particularly ground stone fragments), and she concluded that the site was eligible to the NRHP under Criterion D and that significant intact deposits could be impacted by the proposed expansion. She, therefore, recommended additional archaeological testing using hand-excavated units and backhoe trenches to define the vertical and horizontal extent of the deposits, further evaluate site significance and integrity within the area of potential effect (APE), assess the effects of the project on significant cultural remains, and gather data needed for a mitigation or preservation plan, if appropriate.

In 2004, AEW implemented the recommendations set forth by Padon and Love (2004) and excavated a series of hand-dug units and backhoe trenches in order to ascertain the location of intact cultural material and to assess potential impacts of park construction on the deposits. The results of the excavation revealed that intact portions of the site were still present around the fringes of the existing park (Price et al., 2005). However, investigations did not extend beyond the extent of the Phase II park expansion.

Field survey for the current effort for this planning study identified more than 50 additional artifacts associated with CA LAN 192 but located outside of the previously defined site boundaries. Artifacts include granite handstones, granite and schist metates, chert cores, and chert debitage.

All of the observed artifacts are consistent with previous collections from CA LAN 192. Three previously identified bedrock mortar features associated with CA LAN 192 were relocated as part of the current effort. These features all lie north of the park (outside of the site boundaries), on the north side of the drainage. Therefore, a new site boundary was recorded which incorporates the newly discovered artifacts and the bedrock mortar features.

The newly discovered material extends northwest from the existing park, along the south side of the Lovejoy Springs drainage. Artifacts extend almost to the base of the buttes on the western

edge of the project area. No artifacts were observed on the buttes themselves, within the drainage, or on the north side of the drainage.

The area incorporated into CA LAN 192, discovered for the Phase 1 survey for this planning study, appears to be the toe of the slope extending northeast from the Lovejoy Buttes. The slope is traversed by Avenue P and has undergone substantial mechanical alteration due to this road construction. However, away from Avenue P (to the northeast), the slope appears to retain much of its original configuration. Soil profiles of excavations conducted by AEW in 2004 on the northwest side of the existing park indicate that the slope has been subject to numerous alluvial and colluvial events, likely associated with powerful storms and heavy rainfall. It is, therefore, difficult to ascertain without further investigation whether the observed surface artifacts are 1) in situ; 2) have been washed down from higher on the slope; or 3) both.

D.2.1.2 CA LAN 1818H

This site was recorded in 1990 as a concrete and rock dam traversing the drainage which drained Lovejoy Springs. The moderate constraint area in **Figure III-1** includes this site. The dam is anchored to bedrock side walls (De Witt and Love, 1990) and consists of a rock masonry structure. The upstream side consists of formed concrete and gunite while the downstream side is primarily river cobbles and concrete. The top four feet of the structure consists of poured concrete on both sides. The bedrock side walls on the upstream side have also been covered with gunite, up to the high-water level. The site record notes a downstream rock masonry abutment near the center of the dam as well as a 10 inch gate valve located low on the dam near the abutment. Due to the disparate heights of the dam on the upstream and downstream sides (the downstream side is twice the height as the upstream side). De Witt and Love suggested that the reservoir behind the dam has been heavily silted in.

Anecdotal evidence provided by a local resident to De Witt and Love (Milton Stark, personal communication) indicated that the dam was constructed in 1922. It was likely constructed to dam up Lovejoy Springs and form a small lake for local residential and commercial use.

Current observation of CA LAN 1818H shows that the site has been largely destroyed. The base of the dam is still observable in the drainage but the upper portions of the dam have all been knocked down, broken, and strewn throughout the area. Some of the destroyed sections are quite large (more than 4 feet in diameter) indicating that some mechanical assistance may have been involved.

D.2.2 Newly Discovered Sites

D.2.2.1 1267 JL Site 1

This site consists of two petroglyph features and an obsidian flake, located in and around a west-northwest facing shallow alcove near the summit of a small butte. A small (approximately 3 meters by 3 meters) flat terrace is located immediately in front of the alcove which then descends steeply down to the floor of Antelope Valley.

The petroglyph is the two cupule features. Petroglyphs have been pecked or carved into the rock (as opposed to pictographs which are painted on to the underlying surface). Cupules are typically small, shallow, and pecked (as opposed to ground like the bedrock mortar holes at LAN-192). They are usually ceremonial in nature as opposed to the more utilitarian mortar cups. The Pomo in northern California refer to cupule locations as “baby rocks” and they are used in association with female fertility. The Shasta, Karok and other Klamath River tribes call them “rain rocks” and use them in their annual world renewal ceremony. Feature A consists of at least 24 cupules on a vertical wall within the alcove (see AEW’s Phase 1 report). The cupules are generally small and circular, measuring 3 to 6 centimeters in diameter and averaging 0.5 centimeters deep. Eleven of the cupules (generally those higher and closer to the outside) have been ground smooth through the dark patination of the rock wall exposing the lighter colored rock underneath. Thirteen of the cupules (generally those lower and deeper in the alcove) have been ground smooth but are covered in patination, obscuring their visibility. It is unclear whether the patinated cupules are of greater antiquity or this difference is due to location (i.e. the cupules are chronologically contemporary but the lower and more sheltered portion of the rock wall patinates at a faster rate than the more exposed portion).

One larger cup is located near the interior of the alcove, on the same face as the cupules. The cup measures 4 cm wide by 6 cm long and is 4 cm deep. In contrast to the cupules, the interior of the cup has not been ground smooth. Additionally, the cup has a rough “hourglass” shape as, opposed to the circular cupules, and is open at the bottom. The entire cupule/cup distribution measures 110 cm x 90 cm while the wall measures approximately 5 meters wide by 8 meters tall.

Feature B contains at least 18 cupules on a weathered granite boulder located just outside the alcove (see AEW’s Phase 1 report). The boulder measures 2 meters long by 1.4 meters wide by 0.90 meters high. The cupules range in diameter from 3 centimeters to 6 centimeters with depths ranging from 0.5 to 1.5 centimeters. It is possible that there are additional cupules on the boulder that have been obscured by weathering.

One black opaque obsidian flake fragment was observed on the small terrace just outside the alcove. Soil on the terrace is primarily coarse sand with few seasonal shrubs scattered around. No overstory is present at the site.

While the butte where 1267 Site JL 1 is located is inaccessible to vehicular traffic, there is ample evidence that the area is actively used by locals. Modern glass fragments and other refuse are scattered throughout the vicinity and many of the exposed boulders contain graffiti of various forms. Integrity at the site is currently good and neither Feature A nor B have been defaced.

E. Potential Constraints

E.1 Cultural Resource Sites

The survey identified a newly discovered prehistoric archaeological site (1276 Site JL 1) just outside the site boundaries, an updated and relocated historic site (CA LAN 1818H), and an

expanded site based on the current investigation (CA LAN 192). The following cultural resource constraint criteria have been developed based on the findings by AEW:

- **High Constraint.** Sites identified on or eligible for the National Register of Historic Places (NRHP) pose a high constraint if they would be directly disturbed or damaged by future development.
- **Moderate Constraint.** Exclusion zones for either the 1276 Site JL 1, CA LAN 1818H, and/or CA LAN 192 archaeological sites, located within the 100-acre site pose moderate constraints to future development with mitigation that could include cultural resource monitoring, excavations, and curations. An exclusion zone is a staked zone around an archaeological site (typically less than a few feet) to ensure that earthmoving equipment do not disturb a site.
- **Low Constraint.** Outside of the exclusion zones for either the 1276 Site JL 1, CA LAN 1818H, and/or CA LAN 192 archaeological sites, low constraints exist.

During the course of the Phase 1 cultural resources survey for this planning study, AEW discovered and documented one previously unknown prehistoric archaeological site (offsite), relocated and updated the status of one previously documented historical site, and expanded the boundaries of one previously known prehistoric site. The undocumented site, 1276 Site JL 1, is comprised of two petroglyph panels (i.e., the cupules) and an obsidian flake. It is located on a small, unnamed butte just outside the southeastern edge of the project area. The historical site, CA LAN 1818H, is the remains of a small dam that once dammed the wash that drained Lovejoy Springs. CA LAN 192 is a large prehistoric site that has been investigated since the 1920s by a series of researchers. It consists of a midden, copious amounts of ground stone tools, flaked stone tools and debitage, shell beads and other ornaments, human remains, bedrock milling features, and other artifacts. The current investigation found evidence that the site extends northwest from the existing site boundaries. The site is considered eligible for inclusion on the National Register of Historic Places (NRHP).

The cultural resource sites and exclusion zones within the 100-acre site pose moderate constraints to development, since mitigation would be required prior to destroying these sites. Extensive excavation and curation could be required. As noted, CA LAN 192 is eligible for the NRHP. The petroglyph site 1276 Site JL 1 is likely eligible due to its integrity and close association to CA LAN 192. Although CA LAN 1818H lacks integrity and is probably not eligible to the NRHP, it has not been formally evaluated.

CHAPTER IV

Geology

A. Introduction

This section provides an inventory on the known topographic, geologic, soils, and seismic conditions at the proposed project site. This section relies on information and data derived from several sources including those available from the U.S. Geological Survey (USGS), and the California Geological Survey (CGS). Site reconnaissance completed by ESA for this baseline inventory provided additional understanding of site-specific conditions as related to topography and geologic conditions. A complete list of references is provided at the end of this section.

B. Study Methods

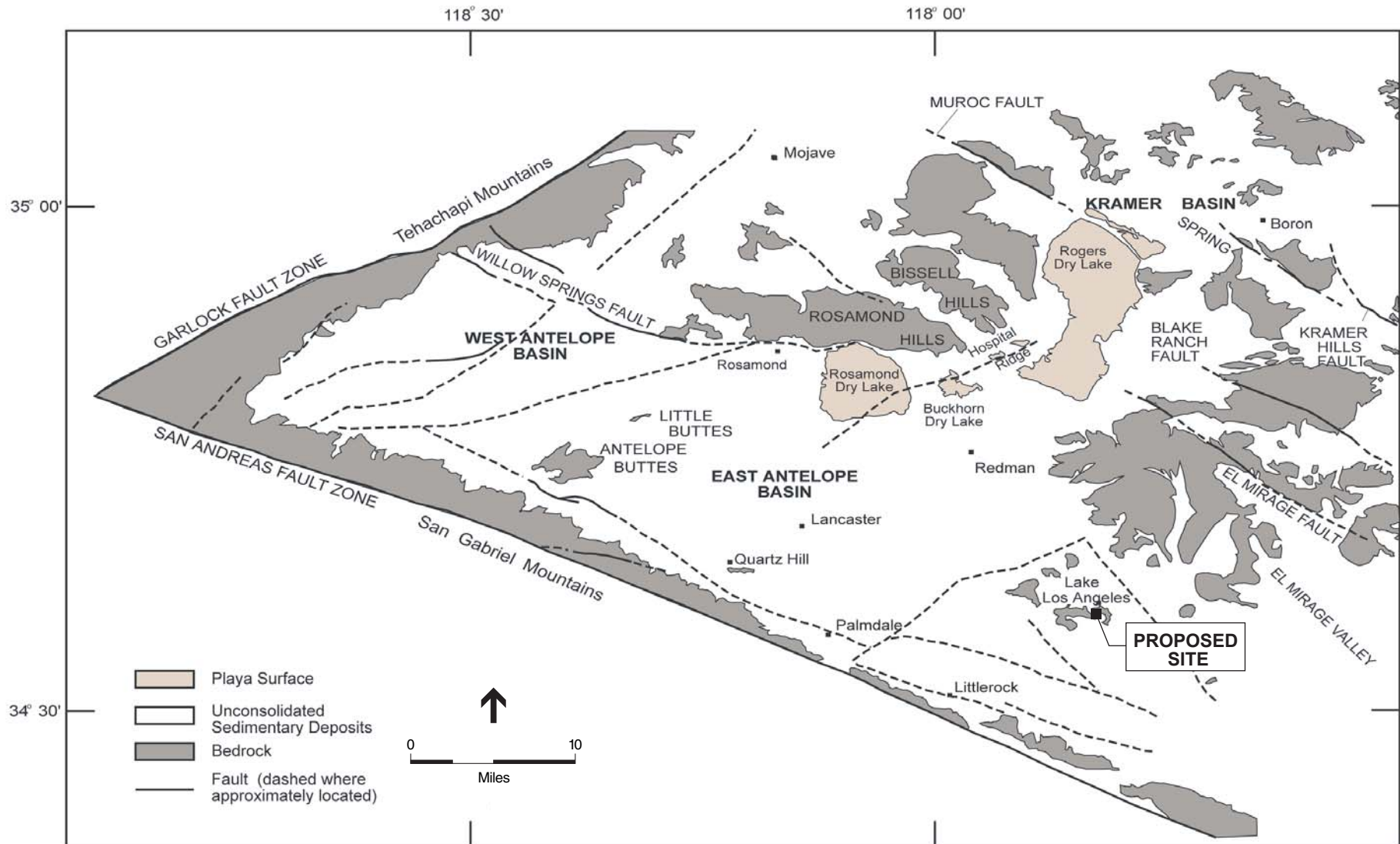
Analysis for this document was accomplished using available resources and professional judgment. The CGS has produced maps showing various geologic hazard conditions such as active faults, liquefaction hazard areas, and landslide hazard areas that were used to aid in the evaluation of the project area.

C. Existing Environment

The site is located within Antelope Valley which is in the western portion of the Mojave Desert geomorphic province, which is bounded by the San Andreas Fault and San Gabriel Mountains to the southwest, the Garlock fault and Tehachapi Mountains to the northwest, and San Bernardino to the east. Topography of this province is controlled by the San Andreas and Garlock Fault systems and consists largely of isolated mountain ranges among desert plains (see **Figure IV-1**).

The Antelope Valley is composed of thick deposits of alluvial and lacustrine (lakebed) materials that have filled the West Antelope, East Antelope, and Kramer structural basins. These structural basins are divided by faulted bedrock that influences groundwater flow between the basins. Numerous playas or dry lakebeds within closed drainage basins are characteristic of the Mojave Desert. Small hills and buttes, remnants of the ancient mountainous topography, rise above the valleys throughout the Antelope Valley.

The rocks of the Mojave Desert geomorphic province are some of the oldest rocks in California. Younger strata are comprised of marine and non-marine sedimentary, volcanic, and metamorphic rocks. At the project site, subsurface materials of the low areas consist of younger alluvial deposits and dune sands characterized by unconsolidated sand and angular boulders, cobbles, and



SOURCE: Londquist, 1993.

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Figure IV-1
Faults in the Antelope Valley

gravels, with silt and clay (Ponti, et al., 1981). The Lovejoy Buttes which partially reside within the project boundary consist of granite and adamellite (i.e., a type of rock formed by volcanic activity).

C.1 Topography

The site is part of the Antelope Valley which is generally flat with a very slight gradient towards the north (see **Figure VI-2**). The generally flat topography is interrupted by resistant buttes that rise above the valley floor. The site encompasses a relatively narrow passage between several buttes which are known as the Lovejoy Buttes. The peaks of these buttes in the site rise up to around 2,800 feet above mean sea level (amsl) while the floor elevations range from 2,640 to 2,700 feet amsl.

The butte in the western portion of the site has two peaks that rise to elevations above 2,775 and 2,825 feet amsl (see **Figure IV-2**) and possess slopes of 50 to 100 percent in the uppermost elevations of the butte (see **Figure IV-3**). From these peaks, the slope percentage quickly becomes 0 to 2.5 percent heading towards the interior of the site, which is shown in **Figure IV-3**. The wash to the east is at elevations between 2,650 to 2,675 feet amsl. The butte in the northeastern portion of the site has one peak that rises above 2,825 feet amsl and also possesses slopes of 50 to 100 percent in the uppermost elevations of the butte (see **Figure IV-3**).

To the southwest of the southwestern most portion of the butte to the northeast, Lovejoy Springs can be found. Lovejoy Springs is a dry spring that possesses granite cliffs that rise 15-20 feet above the wash on either side and these cliffs possess slopes of 50 to 100 percent (see **Figure IV-3**).

C.1.1 Unique Geologic Features

Unique geologic features are present at the site. The buttes in the western and northeastern areas of the site are part of the Lovejoy Buttes and would be considered unique geologic features as they rise above surrounding elevations. These buttes possess granitic rock outcrops that define the character of the Lovejoy Buttes area. **Figure IV-4** illustrates unique geologic feature constraints at the site and the determined level of constraint, including these buttes. At Lovejoy Springs, granite cliffs on either side of the wash could be considered significant unique geologic features of the site (see **Figure IV-4**). **Figure IV-5** is a picture of a portion of Lovejoy Buttes onsite.

C.2 Soils

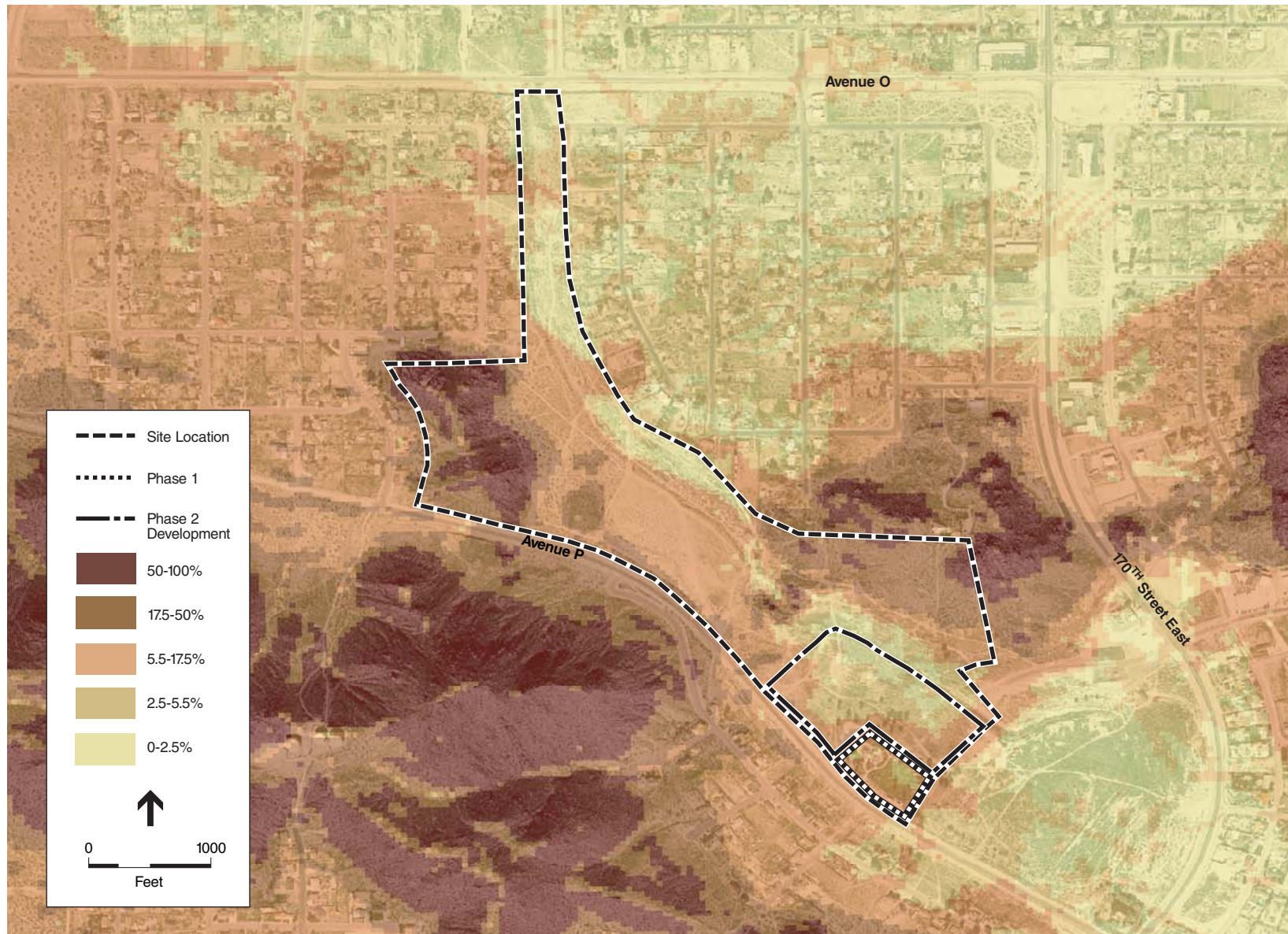
Soils within the assessment area are derived from the downslope migration of loess, a wind derived deposit of fine sediments, and alluvial materials, mainly from granitic rock sources originating along the eastern slopes of the Tehachapi and San Gabriel Mountains. The soils for the bulk of the assessment area consist of the Hesperia-Rosamond association. These soils are comprised of a combination of moderately permeable alluvial deposits derived from erosion of the mountains on the perimeter of the alluvial plain. The moderately permeable areas consist of sands, silty sands, and gravels with modern geomorphic expression in the many alluvial fans at the edges of the basin. Hardpan, or caliche, exhibiting low permeability is also found locally in some areas.



SOURCE: GlobeXplorer, ESA 2005

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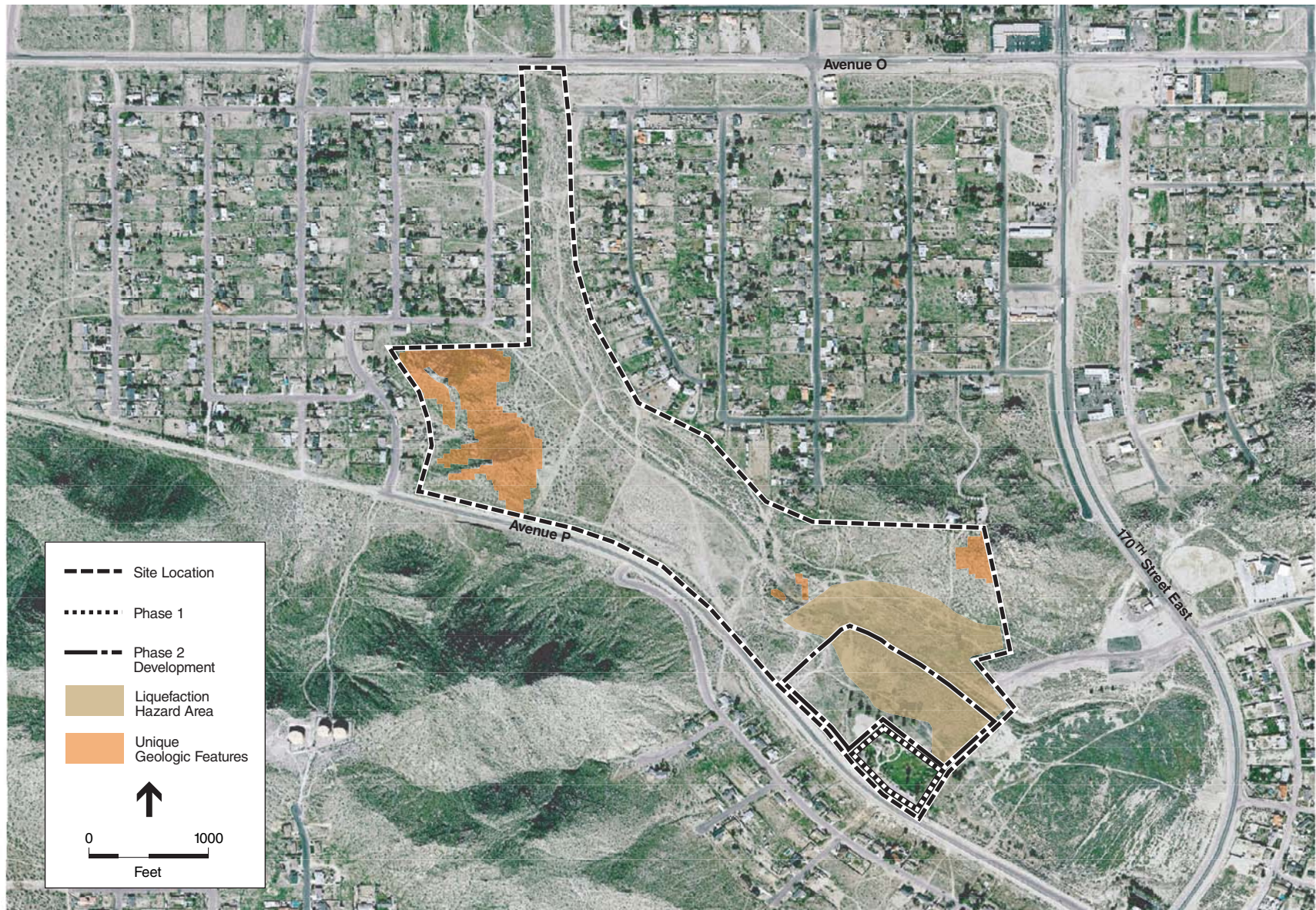
Figure IV-2
Topography



SOURCE: GlobeXplorer, ESA 2005

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Figure IV-3
Slope (Percent)



SOURCE: GlobeXplorer, CGS, Seismic Hazard Mapping Program

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Figure IV-4
Seismic Hazard Zones and
Unique Geologic Features



Figure IV-5. Portion of Lovejoy Buttes Onsite

In general, soils within the assessment area are characterized as being relatively level, well-drained, moderately to highly alkaline,¹ and contain considerable areas that are saline affected (NRCS, 1969). A majority of the soils in the assessment area contain calcareous materials in the sub-surface horizons of the profile and consist of variably stratified loams. With the relatively dry climatic regime of the area, soils within the assessment area lack substantial amounts of organic matter and are characterized by a relatively low inherent fertility.

C.3 Regional Faults

Southern California contains both active and potentially active faults and is considered a region of high seismic activity.² In the past 100 years, several earthquakes of magnitude 5.0 or larger have been reported on the active San Andreas, Garlock, and San Fernando fault systems. In Southern

¹ Alkaline – Any soil that has a pH of greater than 7.

² An active fault is defined by the state of California as a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. Sufficiently active is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 1997).

California, the last earthquake exceeding Richter magnitude 8.0 occurred in 1857. Much more frequent are smaller tremors such as the moderate 1992 Landers earthquake (Richter magnitude 7.0), and 1971 San Fernando and 1994 Northridge earthquakes (both Richter magnitude 6.7). These earthquakes caused extensive damage throughout Southern California. The 1997 Uniform Building Code locates the entire region within Seismic Risk Zone 4. Areas within Zone 4 are expected to experience maximum magnitudes and damage in the event of an earthquake.

The San Andreas Fault is a strike-slip-type fault³ traversing Los Angeles County that has experienced movement within the last 150 years. The San Andreas Fault is a major structural feature in the region, forming a boundary between the North American and Pacific tectonic plates. To the south, the San Gabriel Mountains roughly denote the path of the San Andreas Fault. The closest fault to the project area is a relatively short splay of the San Andreas known as the Llano Fault which could produce some groundshaking or be triggered by an event on one of the other faults (City of Palmdale, 1993). Other faults capable of producing significant ground shaking in the area are listed in **Table IV-1** and include the Garlock Fault, San Gabriel Fault, and Sierra Madre (San Fernando) Fault. **Figure IV-1** illustrates the faults in the Antelope Valley, including the major San Andreas and Garlock Faults as well as other minor faults such as the Willow Springs Fault, Murloc Fault, Kramer Hills Fault, El Mirage Fault, and other unnamed faults. Major seismic events on any of these active faults could cause significant ground shaking and surface fault rupture. The estimated magnitudes (moment) identified in **Table IV-1** represent *characteristic* earthquakes on particular faults.⁴

**TABLE IV-1
FAULT ZONES IN THE PROJECT VICINITY**

Fault Zone	Distance from the Project area	Regency of Faulting^a	Slip Rate^b (mm/year)	Maximum Moment Magnitude
San Andreas	10 miles south	Historic	34	6.8 to 7.9
Garlock	50 miles northwest	Historic, Holocene	6	6.5 to 7.1
Sierra Madre-San Fernando	30 miles southwest	Historic	2	6.7 to 7.0
Llano	5 miles southwest	Holocene	NA	NA
San Gabriel	25 miles south	Holocene	1	7.0

^a Regency of faulting from Jennings, 1994. Historic: displacement during historic time (within last 200 years), including areas of known fault creep; Holocene: evidence of displacement during the last 10,000 years; Quaternary: evidence of displacement during the last 1.6 million years; Pre-Quaternary: no recognized displacement during the last 1.6 million years (but not necessarily inactive). Multiple periods are listed when different branches have shown displacement for different geologic periods.

^b Slip Rate = Long-term average total of fault movement including earthquake movement, slip, expressed in millimeters.

SOURCES: Hart, 1997, Jennings, 1994, Peterson et al., 1996.

³ “Strike-slip” faults primarily exhibit displacement in a horizontal direction, but may have a vertical component. Right-lateral strike slip movement of the San Andreas Fault, for example, means that the western portion of the fault is slowly moving north while relative motion of the eastern side is to the south.

⁴ Moment magnitude is related to the physical size of a fault rupture and movement across a fault while Richter magnitude scale reflects the maximum amplitude of a particular type of seismic wave. Moment magnitude provides a physically meaningful measure of the size of a faulting event (California Division of Mines and Geology, 1997). The concept of “characteristic” earthquake means that we can anticipate, with reasonable certainty, the actual damaging earthquake that can occur on a fault.

D. Seismic Hazards

D.1 Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different segments of the same fault. Ground rupture is considered more likely along active faults. No special hazard zones delineated by the 1972 Alquist-Priolo Special Studies Zone Act are located within the project area. Since no mapped active or potentially active faults are known to pass through the project area, the potential risk from fault rupture is considered very low.

D.2 Ground Shaking

Areas most susceptible to intense ground shaking are those located closest to the earthquake-generating fault, and areas underlain by thick, loosely unconsolidated and saturated sediments. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material.

While the earthquake magnitude is a measure of the energy released in an earthquake, intensity is a measure of the ground shaking effects at a particular location. Areas underlain by bedrock typically experience less severe ground shaking than those underlain by loose, unconsolidated materials.

The unconsolidated nature of underlying soils in portions of the project area, although located relatively distant from faults, can intensify ground shaking. Ground shaking from a significant event on one of the major faults would likely cause some degree of damage to project facilities, however, well-designed structures would not be anticipated to experience serious damage or collapse.

D.3 Liquefaction

Liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. Soil liquefaction causes ground failure that can damage roads, pipelines, buildings with shallow foundations, and levees. Liquefaction can occur in areas characterized by water-saturated, cohesionless, granular materials at depths less than 40 feet. Groundwater within the project area occurs at depths of 10 feet in some areas beneath the drainage. According to the CGS, the southern portion of the project area has been identified as a Seismic Hazard Zone for susceptibility to liquefaction (see **Figure IV-4**).

D.4 Landslide Hazards

A landslide is a mass of rock, soil, and debris displaced down-slope by sliding, flowing, or falling. The susceptibility of land (slope) failure is dependent on the slope and geology as well as the amount of rainfall, excavation, or seismic activities. Factors that decrease resistance to

movement in a slope include pore water pressure, material changes, and structure. Removing the lower portion (the toe) of a slope decreases or eliminates the support that opposes lateral motion in a slope. Shaking during an earthquake may lead materials in a slope to lose cohesion and collapse. The project area includes some steep terrain around the buttes at the eastern and western edges. CGS has mapped some of the butte areas as a earthquake-induced landslide hazard but nothing within the project area boundaries (see **Figure IV-4**).

E. Non-Seismic Geologic Hazards

E.1 Erosion

Erosion can be initiated by wind or water. Silt-sized particles are most easily eroded due to their size and low cohesiveness. Soils residing within the assessment area are susceptible to wind erosion, especially during the spring and fall months when wind speeds increase. Sporadic, torrential rains can cause major flash flood events that create significant erosion in the region. The assessment area contains soils with a moderate potential for erosion (NRCS, 1969).

E.2 Expansive Soils

Expansive soils possess a shrink-swell characteristic⁵ that can result in structural damage over a long period of time. Expansive soils are largely comprised of silicate clays, which expand in volume when water is absorbed and shrink when dried. Highly expansive soils can cause damage to foundations and roads. In general, the soils within the assessment area have a low potential for expansion.

F. Potential Constraints

F.1 Seismic Hazards

The proposed project site is located within an area susceptible to ground shaking in the event of an earthquake on either the San Andreas fault, the San Gabriel fault, and to a lesser extent, the Llano fault. The following seismic ground shaking constraint criteria have been developed based on ground shaking hazards:

- **High Constraint** if potential ground shaking severity was “Very Strong” and occurred in young alluvium material located on slopes greater than 50 percent. Development in these areas would be infeasible due to potential for structural damage and slope failure.
- **Moderate Constraint** if potential ground shaking severity was “Strong” and occurred in the area designated by CGS as susceptible to liquefaction. Development in these areas would be feasible with required investigation and mitigation.

⁵ “Shrink-swell” is the cyclical expansion and contraction that occurs in fine-grained clay sediments from wetting and drying. Structures located on soils with this characteristic may be damaged over a long period of time, usually as the result of inadequate foundation engineering.

- **Low Constraint** if potential ground shaking severity was “Moderate” and occurred in low lying areas outside of the liquefaction area defined by CGS. Development in these areas would be feasible under California Building Code Zone 4 Seismic Criteria.

Figure IV-6 illustrates seismic hazard (geologic) constraints. The majority of the project site is not located in a region of high seismic constraint. The entire project site is located close enough to the San Andreas fault to potentially experience a very strong earthquake, however only the upper reaches of the Buttes contain slopes of 50 percent or greater that would induce landslide hazards and pose a high developmental constraint (see **Figure IV-4**). A moderate seismic constraint exists on the site within the CGS liquefaction hazard zone (see **Figure IV-4**). Site specific geotechnical investigations and adherence to seismic building code requirements would make development feasible in this moderate constraint area. The remaining portions of the site exhibit low seismic hazard constraints.

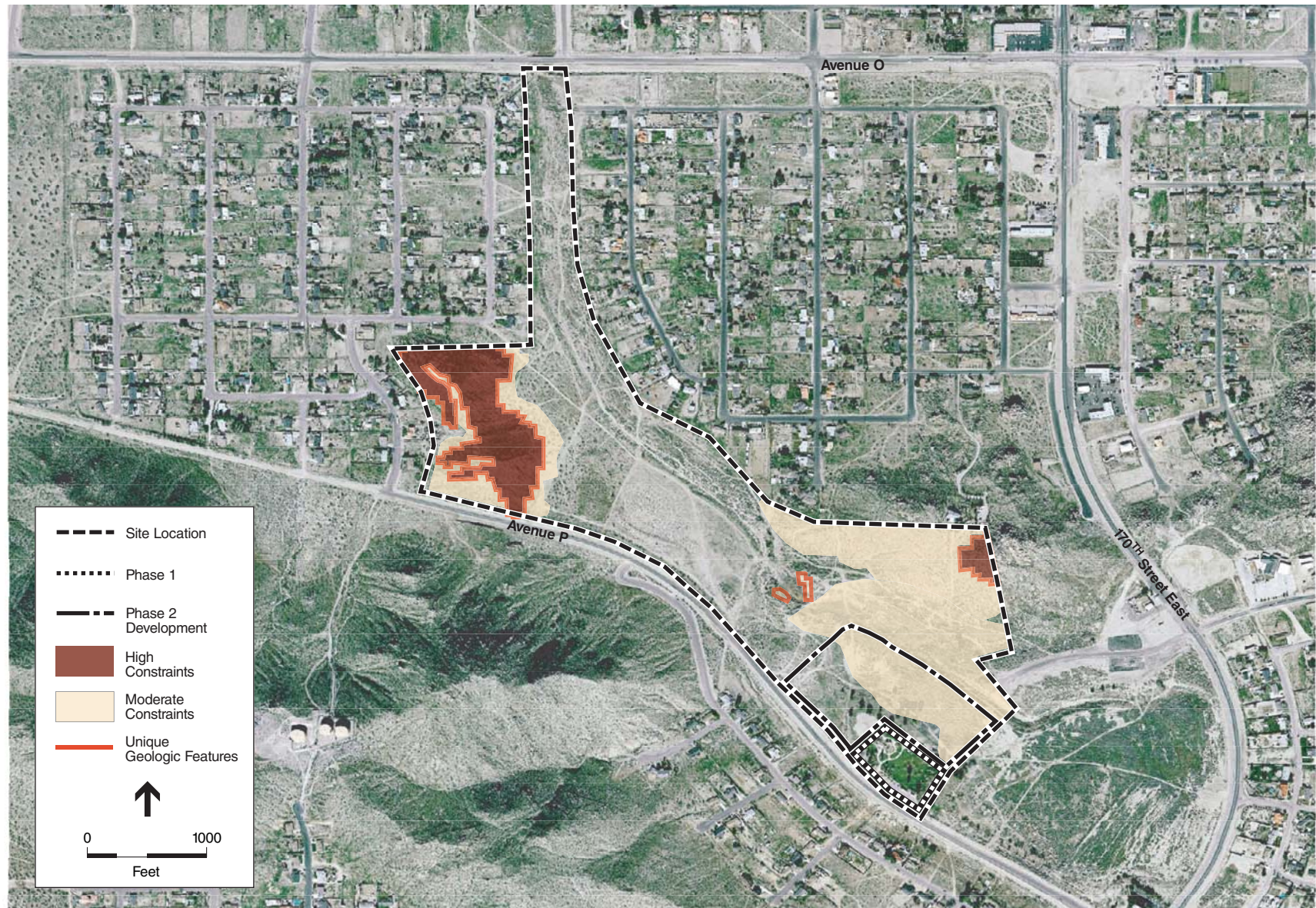
F.2 Topography and Soils

The entire area is susceptible to erosion. The following erosion potential criteria have been applied to the project site:

- **High Constraint** if the soil or rock type is considered by National Resource Conservation Service (NRCS)⁶ as moderately erodable and located on steep slopes with sparse or no vegetative cover. Development in this area is infeasible due to erodable soils on slopes greater than 50 percent.
- **Moderate Constraint** if the soil or rock type is considered by NRCS to be potentially erodable by wind or water and located on slopes from 17.5 percent to 50 percent with sparse vegetative cover. Development is considered feasible but temporary (construction) and permanent erosion control measures would be required.
- **Low Constraint** if the soil or rock type, considered by NRCS as moderately erodable, is located on slopes ranging from 0 percent to 17.5 percent with vegetative cover, development is feasible. Minor erosion control features would be necessary.

Figure IV-7 illustrates soil erosion constraints based on topography (slope). The majority of the project site is underlain by Hesperian and Rosamond soils which are identified by the U.S. Department of Agriculture (USDA) NRCS as moderately susceptible to water and wind erosion. Areas of the site where slopes are less than 50 percent would require specialized attention to prevent erosion. However development is considered feasible and the soil erosion constraint would be considered a moderate constraint for development. The bulk of the property has a low constraint for soil erosion and would require erosion control measures typical of most development.

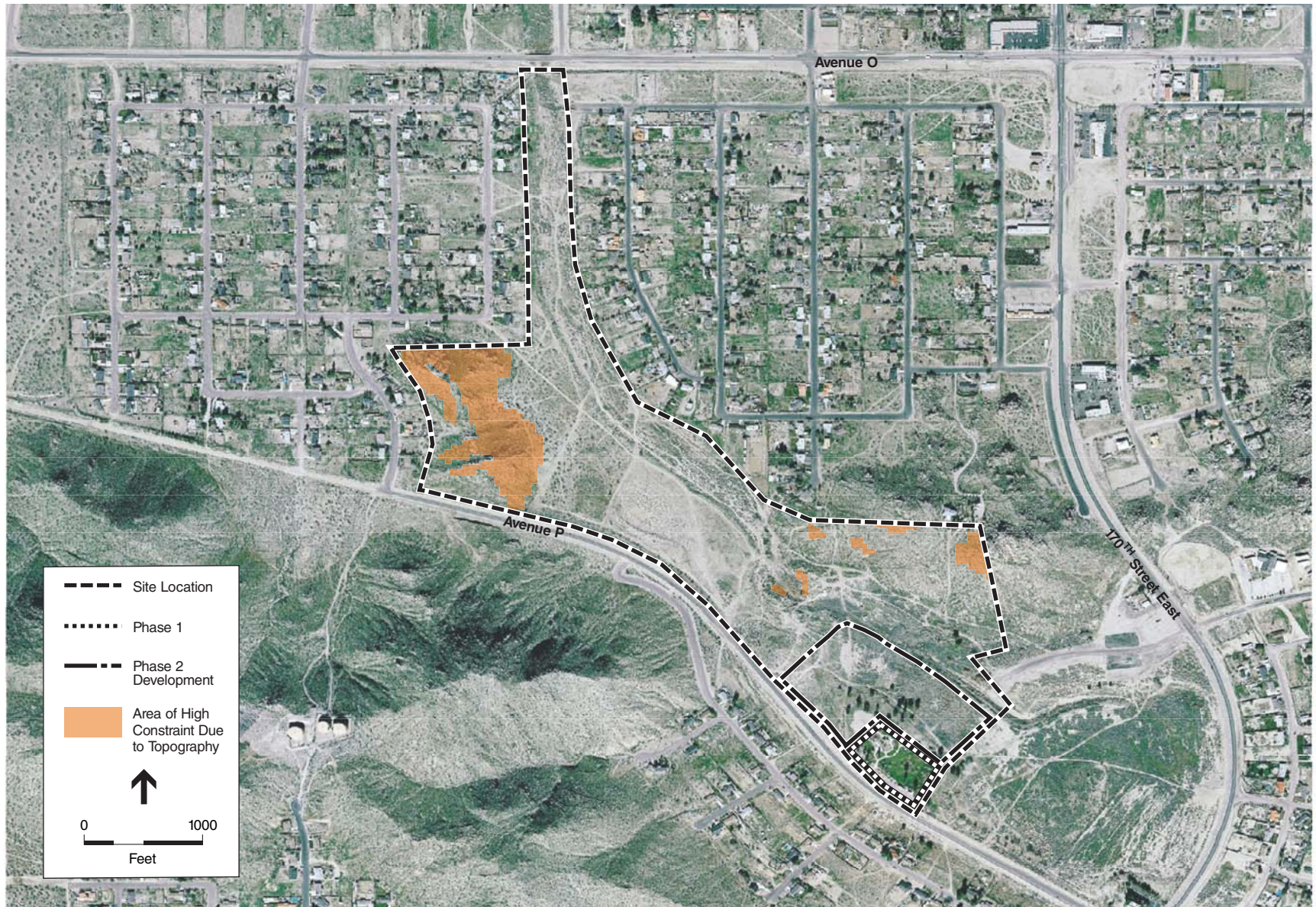
⁶ Formerly the Soil Conservation Service.



SOURCE: GlobeXplorer, CGS, Seismic Hazard Mapping Program

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Figure IV-6
Geologic Constraints



SOURCE: GlobeXplorer, ESA 2005

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Figure IV-7
Topography Constraints

F.3 Unique Geologic Features

The area encompasses portions of Lovejoy Buttes and Lovejoy Springs that exhibit unique rock outcroppings. The following constraints have been developed considering unique geologic features:

- **High Constraint** if an area exhibits rock outcroppings rising over 20 feet from the surrounding elevations because development would require eliminating unique landmarks of the region.
- **Moderate Constraint** if an area exhibits rock outcroppings rising 10 to 20 feet from the surrounding elevations because development would require eliminating unique geologic features of the region.
- **Low Constraint** if an area is relatively flat and does not possess rock outcroppings.

Figure IV-4 illustrates unique geologic features at the site. The higher elevations of the site exhibit high constraint to development since they are part of the Lovejoy Buttes (see **Figure IV-6**). These buttes can be seen for long distances and are considered unique geologic landmarks. Lovejoy Springs poses a moderate constraint since the granite cliffs on either side of the wash rise 15-20 feet above the wash and could be considered a unique geologic feature of the region but are less imposing or visible than the buttes themselves (see **Figure IV-6**). The remaining portions of the site pose low constraints due to geologic features.

CHAPTER V

Hazardous Waste Sites

A. Introduction

This chapter identifies known hazardous waste sites in the vicinity of the site.

B. Study Methods

An Environmental Data Resources (EDR) Radius Map search was performed for 40000 167th Street East, Palmdale, CA, 93591 and a 2 mile buffer around that address (EDR, November 7, 2005). This address location is roughly in the middle of the site and the buffer completely subsumes the entire site. The executive summary from that search is contained in Appendix C of this document. More than 51 different federal, state, and local environmental databases were searched, including Brownfield sites, leaking underground storage tank (LUST) sites, historical cleanup sites, etc.

C. Existing Environment

C.1 EDR Database Search

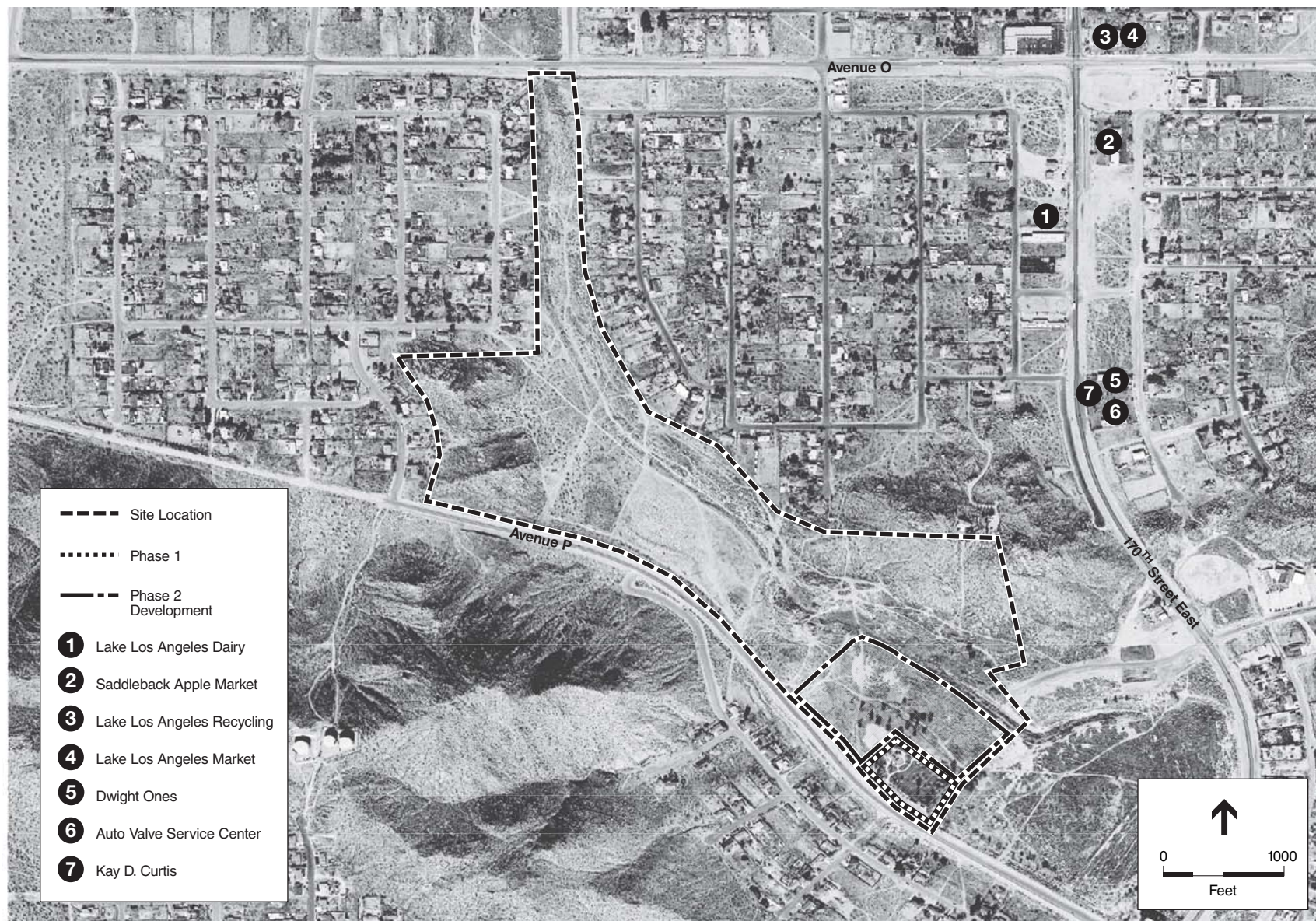
The EDR search identified no portion of the site in any of the hazardous waste site databases searched. Within a 2 mile radius of the 40000 167th Street East, Palmdale, CA, 93591, six sites were identified by the inquiry (see **Figure V-1**). These sites are detailed in **Table V-1**.

No portion of the site was listed in any of the databases searched. Therefore, groundbreaking and construction activities at the site would not likely release any known toxins or contaminants onsite or convey hazardous materials offsite.

Offsite, the sites listed above include an auto shop, a dentist office, a dairy, and a market with recycling capability; hazardous materials generated by these uses are typically minor and localized. It is unlikely that the proposed project site has been affected by hazardous materials contained at any of these sites.

C.2 Illegal Dumping

During the reconnaissance visit, a significant amount of debris that has been dumped throughout the site was observed, including an abandoned car, scrap housing materials, paper rubbish, and



SOURCE: GlobeXplorer, EDR 2005

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Figure V-1
Location of Sites Identified
as Storing or Generating
Hazardous Material or Waste

TABLE V-1
SUMMARY OF THE EDR SEARCH WITHIN 2 MILES OF 40000 167TH STREET EAST

Site Name	Site Address	Direction	Database Listing	Environmental Issues
1/4 – 1/2 Mile				
Dwight Ones DDS	40112 170 th Street East, Suite C	ENE	HAZNET	HAZNET: 0.0208 tons of unspecified organic liquid mixture and 0.0001 of other inorganic solid waste.
Kay D. Curtis	40112 170 th Street East, Suite C	ENE	LOS ANGELES CO. HMS	LOS ANGELES CO. HMS: Permit and Facility Status as Removed.
Lake Los Angeles Auto Valve Service Center	40134 170 th Street East, Unit D	NE	HAZNET	HAZNET: 0.5837, 0.2293, and 0.1200 tons of waste oil and mixed oil; 0.9000 and 0.4587 tons of unspecified aqueous solution.
Lake LA Dairy	40245 170 th Street East	NE	UST	UST: One (1) UST.
1/2 – 1 Mile				
Lake Los Angeles Market	40340 170 th Street East	NNE	HIST UST	HIST UST: Three (3) USTs storing Not Reported, Unleaded, and Premium.
Lake LA Recycling/Saddleback Apple Market	17051 East Avenue O	NNE	UST; SWRCY	UST: One (1) UST; SWRCY: Date of certification is 8/1/97.

Key:

HAZNET □ Data extracted from the copies of hazardous waste manifests received each year by the DTSC

HIST UST □ Historical underground storage tanks

LOS ANGELES CO. HMS □ Los Angeles County industrial waste and underground storage tank sites

SWRCY □ Listing of recycle facilities in California

UST □ Underground storage tank database containing registered USTs

SOURCE: EDR, November 7, 2005.

old tires. No paints, waste oils, or other hazardous material containing containers were observed at the site. However, in the event that containers containing hazardous materials are found onsite, they would need to be disposed of in accordance with applicable federal, state, and local regulations with regards to the disposal of hazardous materials.

D. Potential Constraints

D.1 Hazardous Waste Sites

The following constraints have been developed considering hazardous waste:

- **High Constraint** would occur if a hazardous waste site that has not been remediated is identified by local regulatory agencies within the site.
- **Low Constraint** would occur if an area has been used in the past but no hazardous waste sites have been identified on site or near the site that could transport contamination on site.

The proximity of known hazardous waste sites poses a low constraint on the site. Illegal dumping may have occurred throughout the site. Prior to development, refuse would need to be appropriately disposed of. This poses a low constraint to development.

CHAPTER VI

Hydrology, Groundwater, and Flooding Hazards

A. Introduction

This chapter addresses potential constraints to future development of the site posed by hydrology and flooding hazards.

B. Study Methods

Potentially relevant reference literature was reviewed to determine the hydrology and potential flooding hazards at the site. Specific information on the project site was developed in part through a reconnaissance survey of the proposed project site. Sources reviewed included:

- Flood Insurance Rate Map (FIRM), Los Angeles County (Unincorporated Areas), Community-Panel Number 065043 0300 B, Effective Date: December 2, 1980; and
- ESA file information and existing literature (see citations).

C. Existing Environment

C.1 Surface Water

The western Mojave Desert is a closed basin which is a playa system consisting of three primary lakebeds— Rosamond, Rogers, and Buckhorn—surrounded by a number of smaller playas. The three larger playas lie within Edwards Air Force Base. Rogers Lake is the largest, covering approximately 46 square miles. Rosamond Lake covers approximately 21 square miles and Buckhorn approximately 2.5 square miles. Today these lakebeds are usually dry, only occasionally covered in water following large winter storms.

The site lies east of Big Rock Creek, one of the major drainages flowing from the San Gabriel Mountains to the playas. Other water sources in the project area include Little Rock Creek, which parallels Big Rock Creek to the west and also drains the San Gabriel Mountains. Additionally, numerous springs occur in the region. The closest one, and on the site, is the now dry Lovejoy Springs, which watered a small valley nestled within Lovejoy Buttes.

The climate is generally dry, experiencing an annual average precipitation of less than 10 inches on the valley floor and greater than 12 inches in the local mountains. Over 80 percent of the mean annual precipitation occurs during the winter months. During the summer months, a relatively minor amount of rainfall occurs with infrequent and localized thunderstorms.

Because the Antelope Valley is a closed basin with no outlet to the ocean, all water that enters the valley either evaporates, infiltrates into the groundwater basin, or flows toward the three playa lakes located near the center of the valley (Rosamond, Rogers, and Buckhorn Dry Lakes). Due to the relatively impervious nature of the playa lake soil, water that collects on the playa lakes eventually evaporates rather than infiltrating into the groundwater.

A number of creeks and washes carry surface water to the playa lakes. As a result of the arid climate, these creeks and washes typically flow only during periods of heavy rainfall or as a result of melting snowpack from the local mountains. Many areas in the Antelope Valley experience sheet flow during particularly heavy rainstorms, but tend to remain dry with moderate and low-intensity storms.

C.1.1 Lake Los Angeles

Lake Los Angeles is a manmade lake located within the unincorporated community of Lake Los Angeles. The lake was fed by pumped groundwater but has been dry for several years because groundwater has not been actively pumped into the depression.

C.1.2 Stephen Sorensen County Park Site

There is one main southeast to northwest trending ephemeral wash that runs the length of the site from Lovejoy Spring toward the northern finger of the site where the water then flows offsite to the north through a culvert that passes underneath Avenue O. Between Lake Los Angeles (a dry, manmade lakebed, which is offsite and to the southeast) and Lovejoy Springs (onsite), a manmade channel allows the conveyance of water from the general area of Lake Los Angeles toward Lovejoy Springs. There was a small pool of surface water present at the time of the reconnaissance survey (November 4, 2005) within Lovejoy Springs. The area had received approximately 1 inch of rain the day before the site visit.

D. Waters of the State Lovejoy Springs

A network of ephemeral washes transverse the site, joining the main wash in the center of the property. The Lovejoy Butte U.S. Geological Survey (USGS) quadrangle map shows the wash as a blue-line stream that flows into Lovejoy Springs. During the survey, hydrophytic (i.e., water loving) vegetation was present within and adjacent to Lovejoy Springs (e.g., willows, tamarisk, giant reed, and cottonwoods). Additionally, the soil at Lovejoy Spring appears to be hydric (i.e., waterlogged). And, the soil may be inundated or saturated by surface water or groundwater periodically during the growing season of the prevalent vegetation, the average annual duration of inundation or soil



SOURCE: GlobeXplorer, ESA 2005

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Figure VI-1
100-Year Flood Plain

saturation may preclude the occurrence of plant species typically adapted for life in aerobic (i.e., with oxygen) conditions. Therefore, the site appears to satisfy the USACE's definition of a "wetland" [U.S. Army Corps of Engineers (USACE), 1987]. However, please note that a formal delineation of wetlands was not in the scope of this planning study.

The USACE has recently indicated that the isolated washes within the Antelope Valley watershed are not considered navigable waters of the United States, as defined in the Clean Water Act and, therefore, are not within their jurisdiction to regulate under Section 404 of the Clean Water Act. Additionally, the ephemeral wash on the site is likely considered to be "isolated," and therefore not subject to regulation under Section 404 of the Clean Water Act or under Section 10 of the Rivers and Harbors Act, per the court findings in the Solid Waste Agency of Northern Cook County v. USACE (SWANCC). However, the SWRCB, under the California Porter-Cologne Act, has taken jurisdiction over isolated waters of the state in the wake of the SWANCC ruling [State Water Resources Control Board (SWRCB), 2004]. "Waters of the state" is defined by the California Water Code [Section 13050(e)] as "any surface water or groundwater, including saline water, within the boundaries of the state." Therefore, discharges into the wash may be regulated by the SWRCB and the SWRCB would likely consider this wash waters of the state and subject to state conservation regulations. Please note that a formal delineation of waters of the state was not in the scope of this planning study.

E. Flooding Hazards

According to the FIRM, Community-Panel Number 065043 0300 B (1980), the ephemeral wash and Lovejoy Springs are designated as Zone A (see **Figure VI-1**). Zone A is defined as "areas of 100-year flood; base flood elevations and flood hazard factors not determined." Therefore, the site contains an area that would be inundated by a 100-year flood event. The rest of the site is outside to 100-year flood plain.

F. Groundwater

Groundwater at the site was encountered at depths between approximately 7 to 16 feet below ground surface (bgs) (Leighton, 2005). Higher groundwater levels were typically found within the area of the wash onsite and lower groundwater levels were found moving away from the wash.

G. Potential Constraints

G.1 Waters of the State/Lovejoy Springs

The site contains an ephemeral wash that flows into Lovejoy Springs that would be likely considered waters of the state. A manmade channel that conveys water from the general area of Lake Los Angeles to the southeast onsite into Lovejoy Springs would also likely be considered waters of the state. The following waters of the state constraint criteria have been developed:

- ***Moderate Constraint*** if future development were to occur within any other areas designated as waters of the state (i.e., the manmade channel, the wash, and Lovejoy Springs).
- ***Low Constraint*** if future development were to occur in areas outside of waters of the state.

The wash, Lovejoy Springs, and the manmade channel onsite would likely be considered waters of the state. Future development within areas designated as waters of the state would likely be a moderate constraint to development and that development would likely require mitigation to reduce impacts to surface waters and permitting from the appropriate agencies. Development of areas outside of the waters of the state would be a low constraint to development.

G.2 Flooding Hazards

The site contains a 100-year flood plain that roughly parallels areas that contain Lovejoy Springs that flows into an onsite ephemeral wash. The following flooding hazards constraint criteria have been developed:

- ***High Constraint*** if future development were to place structures within a 100-year flood plain that could result in the loss of life or property as a result of a 100-year flood event.
- ***Low Constraint*** if future development were to place structures outside of the 100-year flood plain.

Future development within the 100-year flood plain would be a high constraint to development due to potential for the loss of life and property as a result of a 100-year flood event. Future development outside of the 100-year flood plain would be a low constraint to development.

CHAPTER VII

Land Use

A. Introduction

This chapter addresses potential constraints to future development of the site regarding land use and compatibility with recreational development at the site.

B. Study Methods

Analysis for this chapter used the following resources:

- *Antelope Valley Areawide General Plan* (Antelope Valley Areawide Plan) (County of Los Angeles, 1986);
- *County of Los Angeles General Plan* (County General Plan) (County of Los Angeles, 1988); and
- Draft *West Mojave Plan* [Bureau of Land Management (BLM), 2005].

C. Existing Environment

C.1 Land Use Designations at the Site

The site is within unincorporated areas of Los Angeles County governed by the policies, procedures, and standards set forth in the County General Plan. The Land Use Policy map in the Los Angeles General Plan describes dominant land use characteristics within the County and provides a policy framework for developing areawide, community, and neighborhood plans. According to the General Plan, the site is designated as a SEA (see **Figure II-1**). SEAs are areas that are designated by the County to maintain biological diversity by establishing boundaries which follow natural biological parameters, including habitats, linkages, and corridors, and have self-sustaining populations of their component species contained within each area (see the Multi-Species Habitat Conservation Plans (HCP)/Natural Community Conservation Plans section in Biological Resources chapter for more information).

According to the Antelope Valley General Plan Land Use Policy map, the entire site's land use designation is Urban 1 (U-1), which limits development to 3.3 dwelling units per acre. Within the vicinity of the site, other U-1 and O areas are designated as well as Non-Urban 1 (N-1), Non-

Urban 2 (N-2), and Commercial (C) areas. The C-designated areas are concentrated at the intersection of Avenue O and 170th Street East.

The entire site has also been identified in the proposed *Draft West Mojave Plan* as part of an area that provides a habitat linkage between Edwards Air Force Base to the north and the Angeles Forest to the south. The *Draft West Mojave Plan* has not yet been adopted by the Bureau of Land Management (BLM) (see Biological Resources chapter for additional information about the *Draft West Mojave Plan*).

D. Governing Land Use Plans

D.1 County General Plan

The General Plan is the basic planning document of a city or county and acts as a “blueprint” for development. Every city and county must adopt a general plan with seven mandatory elements: land use, circulation, housing, conservation, open space, noise, and safety. Other topics that local governments frequently choose to address are public facilities, parks and recreation, community design, or growth management, among others. Depending on the community’s location, general plans also contain special topics, including local coastal plans, waste management, hazardous waste, seismic hazards, floodplain management, and airport land use.

The goals of the County General Plan Land Use Element relevant to the future development of the site are as follows:

- Significant Ecological Areas: Within SEAs, certain activities are considered compatible including:
 - Passive recreation including wildlife observation and photography;
 - Limited picnicking, riding, hiking, and overnight camping;
 - Certain uses found compatible as determined by a detailed biotic survey and conditioned as may be necessary to ensure the protection of ecological resources.
- Each development proposed within an SEA would be subject to a Regional Planning Commission Review and Action for compliance with the following design criteria:
 - Designed to be highly compatible with biotic resources present, including setting aside sufficient undisturbed areas;
 - Designed to maintain bodies of water, watercourses, and tributaries in a natural state;
 - Designed to maintain wildlife corridors;
 - Developed to retain sufficient buffer (i.e., natural vegetation cover and/or open space) to buffer critical resource areas from proposed development;
 - Design fences and walls, if necessary, to buffer; and
 - Design and locate roads and utilities serving the proposed development so as to not conflict with critical resources, habitat areas, or migratory paths.

D.2 Antelope Valley Areawide Plan

The goals of the Antelope Valley General Plan Policy Maps chapter (equivalent to a Land Use Element) relevant to the future development of the site are as follows:

- Residential (Urban 1): Urban 1: to 3.3 dwelling units per acre.
 - The following policies shall apply to all residential designations:
 - Residential density designations in the Antelope Valley should be considered as average densities for the total proposed development site to promote clustering, the provision of additional open space, and the avoidance of hazardous lands. Clustering shall be defined as the rearrangement of units allowed within a single land use classification on a project site. When this option is exercised, the open space should be classified by the County as non-buildable area until demolition of the project or revision of the General Plan. As a component of this consideration, a suitable open space maintenance agreement shall be required for the life of the development.
- Hillside Management Areas: Hillside Management Areas are defined as mountainous or foothill terrain having a natural slope of 25 percent or more and subject to conditions pertaining to hillside development in the County General Plan (see C.1 County General Plan).
- Significant Ecological Areas: It is the intent of the Antelope Valley General Plan to preserve significant ecological resources and habitat areas in as viable and natural condition as possible. Compatible land uses within a SEA include:
 - Passive recreation including wildlife observation and photography;
 - Limited picnicking, riding, hiking, and overnight camping; and
 - Residential uses [including U-1, which is the land use designation of the site] at densities compatible with the resource values present, and consistent with community character in terms of both overall density and magnitude.

D.3 West Mojave Plan

The West Mojave Plan is a habitat conservation plan (HCP) and federal land use plan that is being jointly prepared by agencies having administrative responsibility or regulatory authority over species of concern within the West Mojave Desert. The West Mojave Plan will define a regional strategy for conserving plant and animal species, such as the desert tortoise and Mohave ground squirrel, as well as their habitats. The plan will develop an efficient, equitable, and cost-effective process for complying with threatened and endangered species laws. The plan will enable the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) to issue programmatic biological opinions and incidental take permits more efficiently. The federal lead agency is the BLM. The plan area extends from Olancho in Inyo County on the north to the San Gabriel and San Bernardino Mountains on the south, and from the Antelope Valley on the west to the Mojave National Preserve on the east. The site is entirely within the West Mojave Plan Area and therefore, may be subject to the guidelines of the West Mojave Plan. The Draft Plan proposes areas of critical environmental concern and desert wildlife

management areas, but currently there are no proposed designations in the assessment area. However, the West Mojave Plan does identify the site as part of a linkage between Edwards Air Force Base to the north and the Angeles Forest to the south.

E. Potential Constraints

E.1 Land Use Compatibility with Governing Plans

The following constraint criteria have been developed to judge the potential land use level of constraint with regards to future development at the site based on the compatibility with the Antelope Valley Areawide Plan and the proposed West Mojave Plan:

- **High Constraint** if future development conflicts with an adopted land use plan, policy, or regulation outlined in the County General Plan, Antelope Valley Areawide Plan, or local zoning ordinance, and a conditional use permit (CUP) would not be allowed.
- **Moderate Constraint** if future development could conflict with an adopted land use plan, policy, or regulation outlined in the County General Plan, Antelope Valley Areawide Plan, local zoning ordinance, or any applicable HCP/NCCP, but, with the issue of a conditional use permit (CUP), recreational land use and related facilities would be allowed.
- **Low Constraint** if future development complies with all adopted land use policies outlined in the County General Plan, Antelope Valley Areawide Plan, local zoning ordinance, and any applicable HCP/NCCP.

There are no high land use constraints to future development at the site because recreational land uses and related facilities would be compatible with the various land use plans, policies, or regulations for the area a CUP may be necessary for development. Additionally, non-urban hillside development (slopes of 25 percent or more) is compatible with certain public land uses, including recreational land uses, according to the County General Plan.

A moderate constraint to development may occur if future development severed the biotic linkage between the southern portion of the site and the northern finger of the site that facilitates wildlife movement. This scenario would conflict with the identified conservation value of the area noted in the Draft *West Mojave Plan*, a proposed HCP.

In addition, the SEA designation poses a moderate constraint to future development, based on the land use criteria within the SEA. The SEA goals are to support development that is compatible with biotic resources present, including setting aside sufficient undisturbed areas; avoiding impacts to bodies of water, watercourses, and tributaries; maintaining wildlife corridors; retaining sufficient buffers or design fences and/or walls to buffer, if necessary between natural areas and proposed development; and locating roads and utilities to avoid critical resources, habitat areas, or migratory paths. This topic is further addressed in the Biological Resources chapter.

The undeveloped portions of the site, including the buttes and Lovejoy Springs, present opportunities for low-impact recreational uses, such as hiking and wildlife viewing. These uses would be compatible with local planning efforts that identify conservation goals for the area.

CHAPTER VIII

Traffic

A. Introduction

This chapter describes the existing transportation network in the region and identifies potential constraints posed by future development at the site.

B. Study Methods

Specific information on the project site was developed in part through a reconnaissance survey of the proposed project site. Sources reviewed included:

- The Thomas Guide for Los Angeles and Orange Counties (Rand McNally, 2005);
- The Antelope Valley Areawide General Plan (County of Los Angeles, 1986); and
- The County of Los Angeles General Plan (County of Los Angeles, 1988).

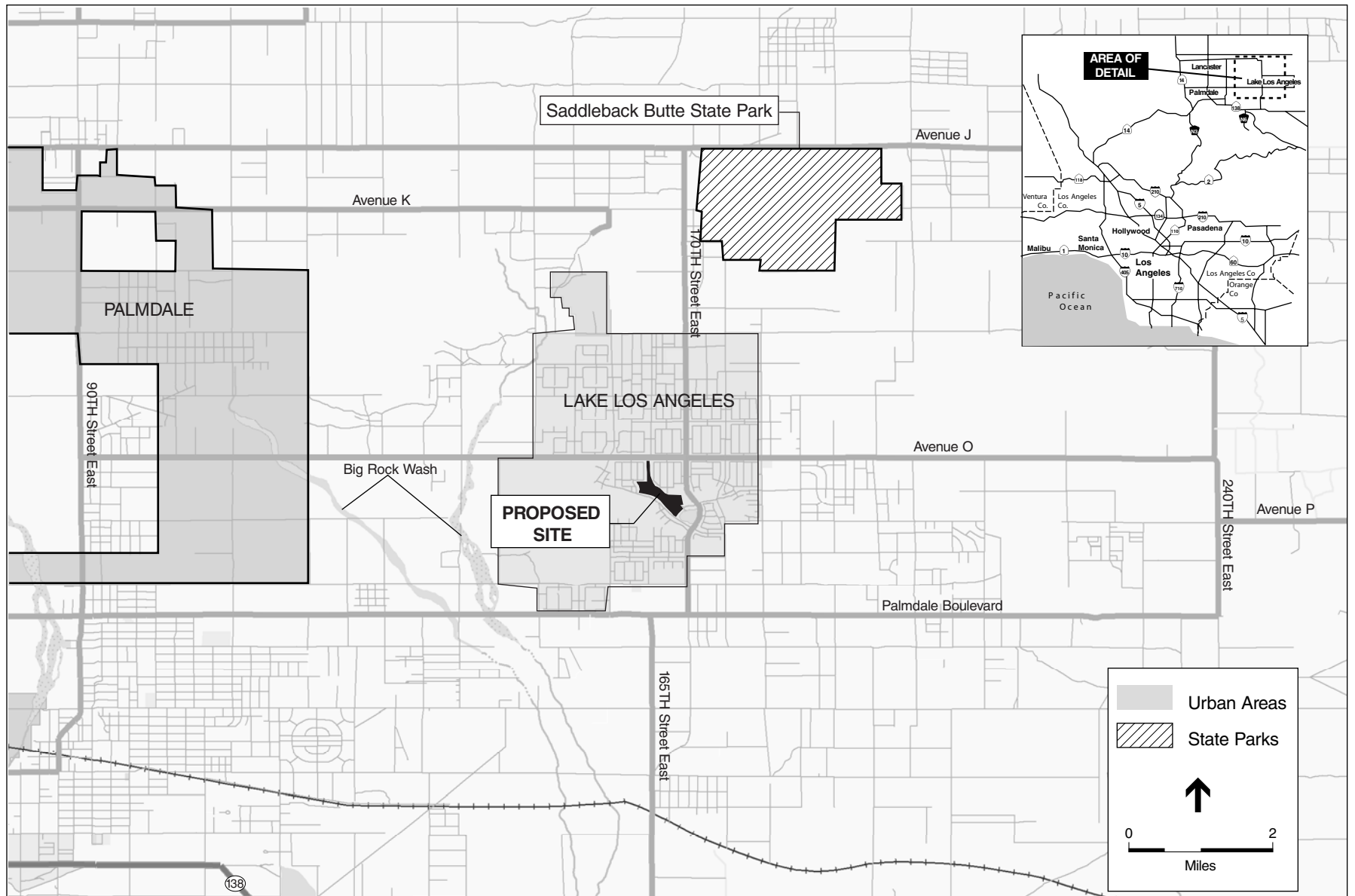
C. Existing Environment

C.1 Local Transportation Network

The closest major freeway to the site is State Route 138 (SR-138), which is approximately 6 miles to the south (see **Figure I-1**). This highway is a west-east trending highway that connects to SR-14 to the west and Interstate 15 (I-15) to the southeast. SR-138 splits with SR-18 approximately 0.5 miles further east of 165th Street East. The site is located between Avenue O and Avenue P, which is approximately 0.5 miles west of 170th Street East (see **Figure VIII-1**).

Palmdale Boulevard is an east-west trending primary road that connects with SR-14 to the west and terminates at 240th Street East to the east approximately 6 miles from the intersection Palmdale Boulevard and 170th Street East. Additionally, Avenue Q (an east-west trending secondary road) provides local access to 170th Street East.

A network of secondary and minor roads connects Avenue O on either side of the site. Access to the site is provided by Avenue P on the south border of the property. Avenue P connects to 170th Street East to the east. Local access to the site is provided from 170th Street East and Avenue P.



SOURCE: ESRI, ESA 2005

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Figure VIII-1
Circulation Map

Access to the site is limited to Avenue P, which connects to 170th Street East and Avenue P (see **Figure VIII-1**). To the north of the site, there are single family homes and access is not available to the site from Avenue O. To the south, access is limited by Lovejoy Butte. To the west, Avenue P provides only local access and dead-ends prior to reaching Avenue O. Avenue O and P are two-lane arterial streets. Lake Los Angeles Avenue is a feeder street that dead-ends at the eastern edge (see **Figure VIII-1**).

D. Potential Constraints

D.1 Local Traffic

The following constraints have been developed considering local traffic:

- **High Constraint** would occur if the site were inaccessible or if access would be substantially inadequate.
- **Moderate Constraint** would occur if the surrounding roadway network would need to be upgraded to support development.
- **Low Constraint** would occur if the surrounding roadway network would support development without a reduction in service.

Access to the site using the local road network would pose a low constraint on development. Avenue P is a two-lane road connecting with 170th Street East that is currently used for local residential access only. The existing roadway network would provide local access that would accommodate additional traffic associated with a park designed to serve local needs. Parking facilities, and potentially turning lanes, on Avenue P may be required depending on the type of development. This would pose a low constraint.

CHAPTER IX

Utilities

A. Introduction

This chapter addresses potential constraints of future development of the site with regards to wastewater disposal, storm water conveyance, potable water, solid waste disposal, and underground utilities.

B. Study Methods

Analysis for this document was accomplished using available resources. Available resources referenced for this chapter included:

- Site Survey;
- Los Angeles County Waterworks District 40, Region 38, Lake Los Angeles, 2004 Annual Water Quality Report; and
- Feasibility Study Proposed Leach Line Sewage Disposal Systems, Stephen Sorensen Park, Lake Los Angeles Area of Unincorporated Los Angeles County, California (Leighton, 2005).

C. Existing Environment

C.1 Wastewater

The community of Lake Los Angeles is entirely on septic or localized treatment systems. No wastewater collection and treatment system exists in the immediate vicinity. Records indicate a septic line conveying raw sewage from a nearby restaurant terminates within the site. It is also assumed that neighboring residential areas are serviced by septic systems adjacent to the northern portion of the site.

As part of this planning study, Leighton Associates conducted a geotechnical survey and percolation testing to assess the site's capacity to accommodate a septic leach field. The survey was intended to identify suitable locations to provide septic leach field capacity for on-site development. The Los Angeles County Department of Health Services private sewage construction specifications require a separation of at least 10 feet between the bottom of proposed leach lines and the top of the groundwater surface, bedrock, and/or other impervious material (County of Los Angeles, 2000).

The survey conducted by Leighton Associates identified an area approximately 2.24 acres in size that is suitable for use as a leach field. The soils in this area exhibit a minimum percolation rate of approximately one inch per 50 minutes. No other areas were identified as suitable for on-site septic disposal. **Figure IX-1** shows the location of this area.

Regulations proposed by the State Water Resources Control Board (SWRCB) provide guidance on determining the capacity of a leach system based on the percolation rate of soils.¹ According to the proposed regulations, soils that exhibit a percolation rate of one inch per 50 minutes may apply a maximum of approximately 0.4 gallons per square foot of infiltration area per day. Applying this assumption to the 2.24 acre site provides for a maximum capacity of over 30,000 gallons per day. Actual accommodation rates would need to be verified by a civil engineer, depending on the development type and septic system design.

Leighton Associates calculates that the site could accommodate a minimum of five 3,500-gallon septic tanks. According to the County guidance, a 3,500-gallon septic tank accommodates a ten unit apartment building.² **Table IX-1** lists standard wastewater generation rates for typical uses. A 5,000 square foot public library could generate 5,000 gallons of sewage per day. A restaurant that seated 100 people could also generate 5,000 gallons of sewage per day based on these planning-level estimates. Based on this analysis, it appears that the site has adequate wastewater septic capacity to accommodate limited development suitable for recreational facilities or community services buildings.

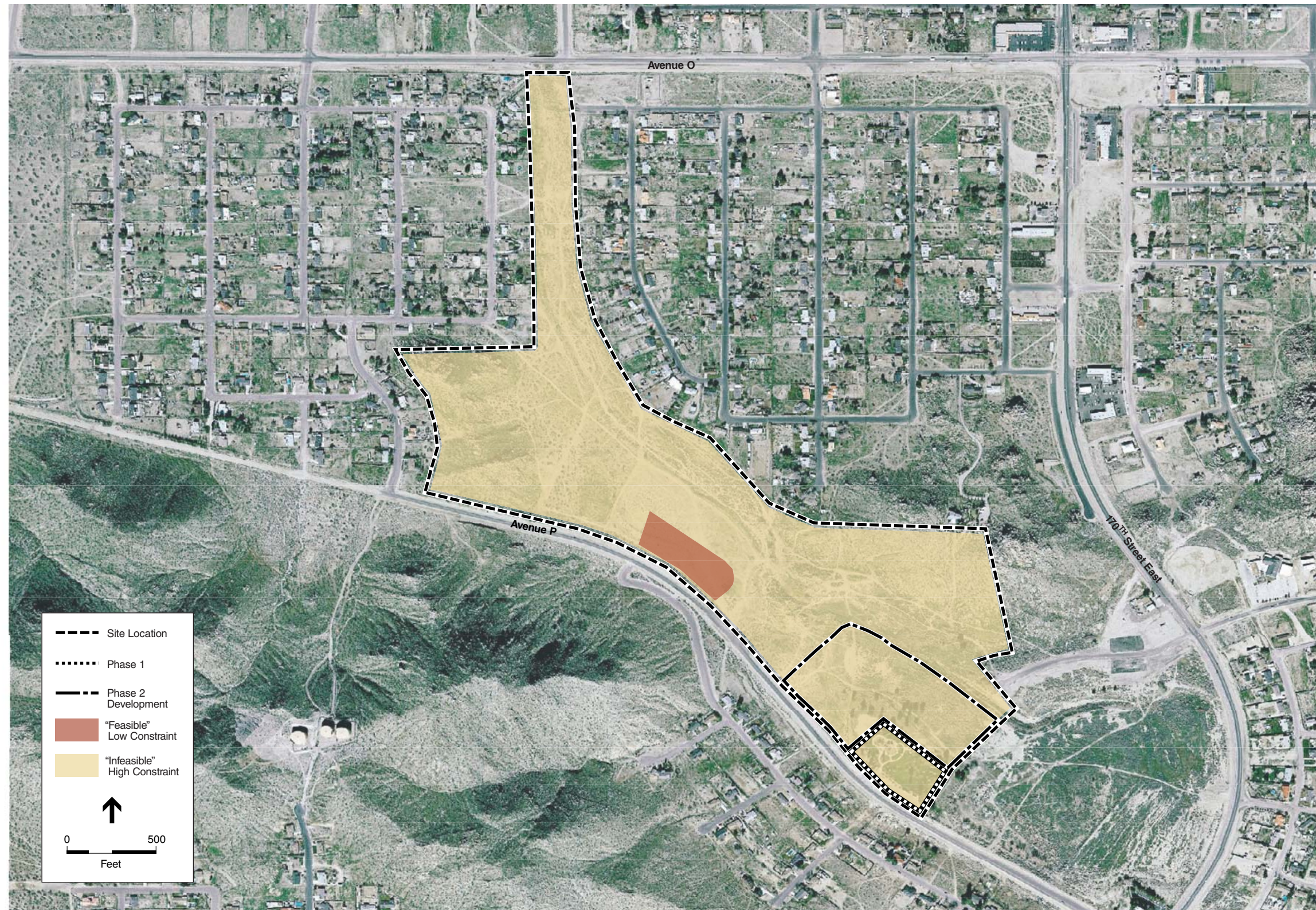
**TABLE IX-1
WASTEWATER GENERATION RATES BY LAND USES AND SIZE OF AREA BY
LAND USE THAT COULD BE ACCOMMODATED ONSITE**

Land Use	Units	Generation Rate
Library: Public Area	(gal/day/sf)	1.00
Library: Stacks/Storage	(gal/day/sf)	0.025
Gymnasium	(gal/day/sf)	0.30
Retail Area	(gal/day/sf)	0.10
Commercial Use	(gal/day/sf)	0.10
Single Family Residential	(gal/day)	330
Restaurant	(gal/day/seat)	50

SOURCE: City of Los Angeles, Bureau of Sanitation, Wastewater Generation Factors, 2001.

¹ Proposed California Code of Regulations Title 27, Division 2, Subdivision 1, Chapter 7, Figure 1.
http://www.swrcb.ca.gov/ab885/docs/ab885_drafrule.pdf

² County of Los Angeles, Department of Health Services, Environmental Health, *Procedures for Application for Approval of Private Sewage Disposal System Construction*, January 1, 2000.



C.2 Storm Water Conveyance

No storm sewer system exists in the region. Rain that falls on-site and storm water that is conveyed from the watershed converges on the blue-line wash at the center of the site and flows northward to a culvert under Avenue O. A few rip-rap lined washes are located on-site that convey storm water runoff from off-site to the wash. No other storm water infrastructure was identified on the site.

C.3 Water Supply

Water service is provided to the Lake Los Angeles community by the Los Angeles County Waterworks District 40. District 40 water supply sources include groundwater and imported water supplied by the Antelope Valley Eastern Kern Water Agency (AVEK). Waterworks District 40 operates two groundwater wells in the Lake Los Angeles vicinity that supplies approximately 40 percent of the local demand.

C.4 Solid Waste Disposal

The closest landfill to the site is Waste Management's Lancaster Landfill and Recycling Center, which handles agricultural waste, tires, construction/demolition, green waste, biosolids, industrial, inert, and mixed municipal waste for portions of the County. This landfill is located at 600 East Avenue F in the City of Lancaster. Currently, the landfill can accept as much as 1,700 tons of solid waste each day.

C.5 Utilities Corridors

The site does not support any designated utility corridors. No overhead power lines traverse the site. No underground utilities including high-pressure natural gas lines or telecommunications lines were identified at the site during the site visit or from literature searches. However, prior to construction an underground utilities search would be required to verify the absence of these utilities.

D. Potential Constraints

Storm water conveyance capacity and utility corridors pose no constraints to development on the site. Solid waste and water supply would pose low constraint on the development since these services are generally available in the area. Future development would need to ensure that adequate capacity is available for the type of development considered. The following section evaluates constraints posed by on-site wastewater generation.

D.1 Wastewater

Development on the site is constrained by septic capacity. The following criteria have been applied to the project site:

- **High Constraint** if no area is identified that provides leach field capacity to comply County of Los Angeles requirements.
- **Moderate Constraint** if an area is identified that provides limited leach field capacity to comply County of Los Angeles requirements.
- **Low Constraint** if an area is identified that provides substantial leach field capacity to comply County of Los Angeles requirements.

The percolation capacity study performed for this analysis identifies a limited area onsite that meets the County of Los Angeles specifications for allowing leach-line sewage disposal system development (Leighton, 2005). Based on preliminary estimates, the site's leach field capacity appears to be adequate for recreational facilities and other county services. Other uses that do not require septic capacity including open space, hiking trails and playing fields would not be constrained by leach field capacity.

CHAPTER X

Constraints Summary

Table X-1 is a summary of the constraints to future development at the site. **Figure X-1** illustrates areas of high and moderate constraints at the site based on the analysis and findings in this planning study; this figure does not include high leach-line potential constraints (see **Figure IX-1**).

A. High Constraints

Areas of high constraints to development at the site include the upper elevations of the buttes in the western and northeastern portions of the site because they provide nesting and roosting sites for raptors, which are protected by the Migratory Bird Treaty Act (MBTA). These upper elevations are also susceptible to landslides and are unique geologic features because they are part of a series of buttes that comprise Lovejoy Buttes. Additionally, areas with greater than 50 percent slope are also high constraint areas and would make development difficult. Finally, areas within the 100-year flood plain are areas of high constraint to future development because the placement of structures within these areas could result in the loss of life and property during a 100-year flood event.

B. Moderate Constraints

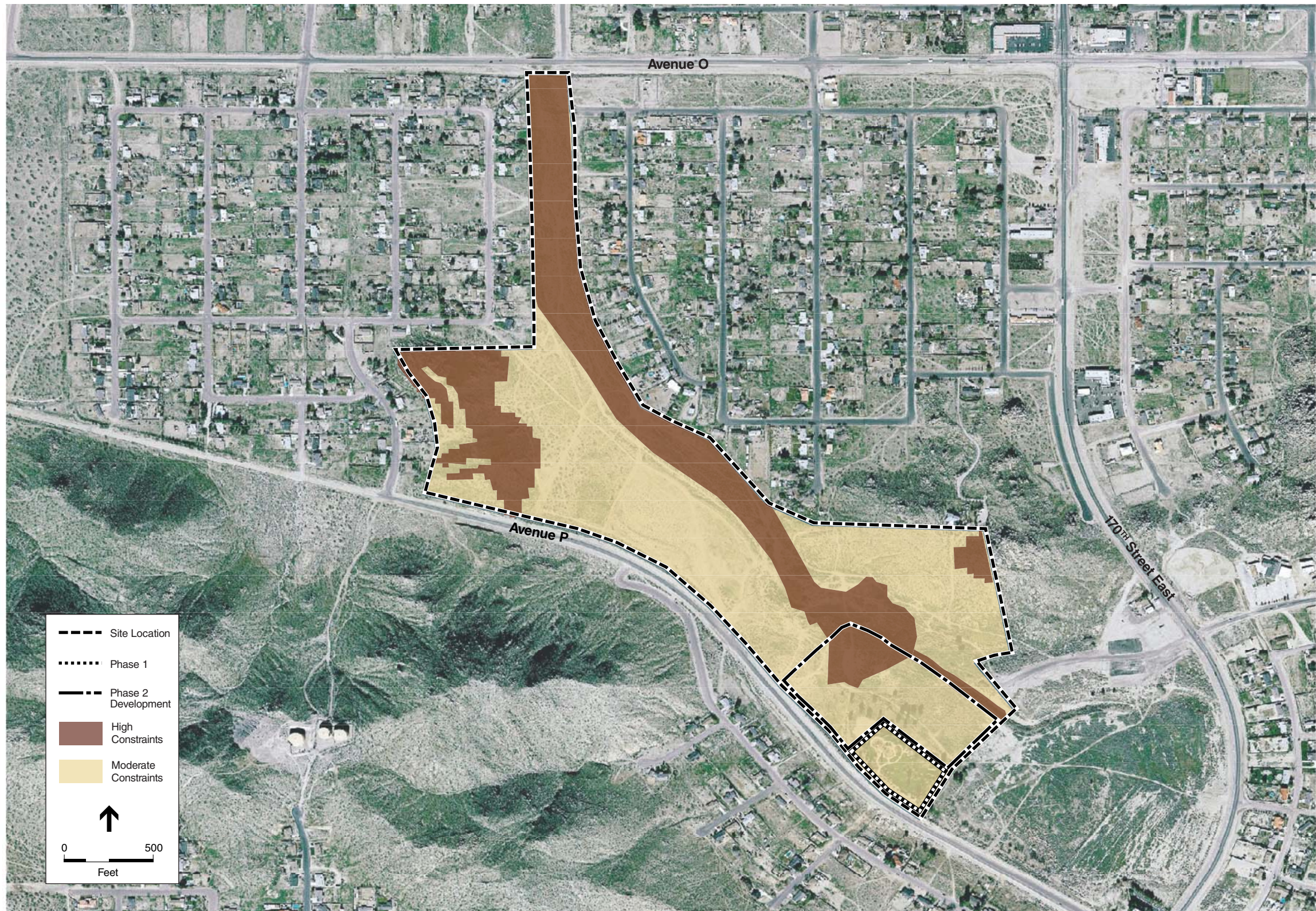
There are also a number of moderate constraints to development at the site. The designation of the site within the County of Los Angeles SEA poses a moderate constraint to development. Adherence to guidelines regarding SEAs within the Antelope Valley Areawide Plan and the County General Plan would be required. Two biological resource concerns pose moderate constraints to development over the entire project site: (1) the entire site, according to the Draft *West Mojave Plan*, is situated within a linkage that facilitates north-south movement of wildlife and (2) extensive portions of the site contain habitat of suitable quality for sensitive species such as the Mojave ground squirrel and desert tortoise. Severance of this linkage would contribute to a regional reduction in wildlife linkages. This is considered a moderate constraint to development. If subsequent protocol-level surveys detect sensitive species at the site, the level of constraint could increase to a high level due to compensation requirements imposed by the various regulatory agencies.

Future development on slopes between 17.5 and 50 percent, in liquefaction prone areas, or over the granitic cliffs in the Lovejoy Springs area would pose moderate constraints to development.

TABLE X-1
SUMMARY OF CONSTRAINTS TO FUTURE DEVELOPMENT AT THE SITE

Issue	Level of Constraint		
	High	Moderate	Low
Biological Resources			
Future development in the upper elevations of the western and northeastern buttes because they could be used for nesting by raptors.	XXX		
Future development over the rest of the site because the site acts as part of a north-south habitat linkage between Edwards Air Force Base and the Angeles National Forest identified by the Draft <i>West Mohave Plan</i> and possesses suitable habitat types for sensitive species.		XXX	
Cultural Resources			
Future development in the exclusion zones for either the 1276 Site JL 1, CA LAN 1818H, and/or CA LAN 192 with mitigation that could require cultural resource monitoring, excavations, and curations.		XXX	
Future development outside these exclusion zones.			XXX
Geology			
Seismic Hazards			
Future development in the upper elevations of the buttes (slopes greater than 50 percent) that would be susceptible to landslide hazards.	XXX		
Future development in CGS liquefaction hazard zones.		XXX	
Future development outside those areas susceptible to landslide hazards or liquefaction.			XXX
Topography and Soils			
Future development on slopes greater than 50 percent would be infeasible because the soils are highly erodible.	XXX		
Future development on slopes between 17.5 to 50 percent.		XXX	
Future development on slopes less than 17.5 percent.			XXX
Unique Geologic Features			
Future development in the upper elevations of the buttes onsite because they are a part of the Lovejoy Buttes and are considered a unique geologic feature of the area.	XXX		
Future development in Lovejoy Springs because the granite cliffs on either side of the wash could be considered a unique geologic feature.		XXX	
Hazardous Waste Sites			
The site does not contain any known unremediated site, but illegal dumping has occurred.			XXX
Hydrology, Groundwater, and Flooding Hazards			
Waters of the State Lovejoy Springs			
Future development in the wash, Lovejoy Springs, and/or the manmade channel because they are waters of the state.		XXX	
Future development outside of areas designated as waters of the state.			XXX
Flooding Hazards			
Future development in the 100-year flood plain.	XXX		
Future development outside the 100-year flood plain.			XXX
Land Use			
If future development severed the linkage between the southern portions of the site and the northern finger that facilitates wildlife movement.		XXX	
Future development over the entire site because it is within an SEA-designated area.		XXX	
Traffic			
The surrounding road network would support future development.			XXX
Utilities			
Wastewater leach field capacity is limited.		XXX	

SOURCE: ESA, 2005.



There are also a number of known cultural resource sites that would pose moderate constraints to development. Additionally, construction within waters of the state onsite would likely require coordination with regulatory agencies and permitting and would be considered a moderate constraint to development.

C. Next Planning Phase

The next phase of the planning study will be to combine the results of the constraints study with a needs assessment and recreational alternatives evaluation. This will involve assessing what recreational needs there are in the community, and what will best fit on the site. Phases I and II already include a number of recreational opportunities, such as baseball fields, basketball courts, playground equipment, and a picnicking area. In addition to the library and gymnasium already contemplated, options for the remainder of the site might include walking trails, junior bouldering, a par course, off-road vehicle trails, equestrian trails, a dog park, and soccer fields.

CHAPTER XI

References

Chapter II □ Biological Resource

Bureau of Land Management (BLM), *Final Environmental Impact Report and Statement for the West Mojave Plan, A Habitat Conservation Plan and California Desert Conservation Area Plan Amendment, Volume 1A*, 2005.

Burk, J. H., *Sonoran desert vegetation*. Pages 869-889 in M. C. Barbour and J. Major, eds. *Terrestrial vegetation of California*. John Wiley and Sons, New York, 1997.

CDFG, *California Natural Diversity Database (CNDDDB). Wildlife Habitat Data Analysis Branch, Habitat Conservation Division*, CDFG, Sacramento, CA, 2005.

Discovery Works, *Phase I Archeological Review of Site CA-LAN-192 at Stephen Sorensen Community Park, Los Angeles County, California*, 2005.

County of Los Angeles, *Antelope Valley Areawide General Plan*, 1986.

Holland, R.F., *Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, Nongame Heritage Program, Dept. Fish & Game, Sacramento, Calif. 156 pp.*, 1986.

Mayer, K. E. and W. F. Laudenslayer, Jr. (ed.), *A Guide to wildlife habitats in California. Sacramento, CA: California Department of Forestry and Fire Protection*, 1988.

Skinner, M.W. and B.M. Pavlik (eds.), *California's Native Plant Society's Inventory of Rare and Endangered Plants of California*. California Native Plant Society, Sacramento, CA, 1986.

Chapter III □ Cultural Resources

Antelope Valley Indian Museum, n.d. *Antelope Valley Indian Peoples*, <http://www.avim.parks.ca.gov/people/>. Antelope Valley Indian Museum Web site, accessed December 8, 2004.

Antevs, E., *The Postpluvial or Neothermal. University of California Archaeological Survey Reports 22:9-23*, 1953.

- Archeological Survey Association (ASA), 1954.
- Barna, Mark, *Unearthing New Perspective*. Bakersfield Californian, February 2, 2004.
- Cannard, Laurie, *Phase I Environmental Site Assessment, Site Number 951007008B—Twin Lakes Community Church, 17213 Lake Los Angeles Avenue, Palmdale, CA 93591*. Prepared by ATC Associates, Inc. 2003.
- County of Los Angeles Public Library, *Antelope Valley Community History*, <http://www.colapublib.org/history/antelopevalley/>. County of Los Angeles Public Library web site, accessed January 14, 2005.
- Davis, E. L (editor), *The Ancient Californians: Rancholabrean Hunters of the Mojave Lakes Country*. Natural History Museum of Los Angeles County Science Series 29, 1978.
- De Witt, William H., and Bruce Love, *Archaeological Site Record for CA LAN 1818H. Pyramid Archaeology, Palmdale, California*. On file with the South Coastal Information Center of the California Historical Resources Information System at California State University, Fullerton, 1990.
- Earle, David, *Important Research Issues in the Study of the Prehistory of the Lovejoy Springs-Piute Butte Region, Los Angeles County*. Manuscript in possession of the author, 2004.
- Glennan, William S., *A Glimpse at the Prehistory of the Antelope Valley: Archaeological Investigations at the Sweetser Site (KER 302)*. Kern-Antelope Historical Society, Lancaster, California, 1971a.
- Grayson, D. K., *The Desert's Past: A Natural Prehistory of the Great Basin*. Smithsonian Institution, Washington, D.C., 1993.
- Johnson, Harry R., *Water Resources of Antelope Valley, California*. Department of Interior United States Geological Survey Water Supply Paper No. 278. Government Printing Office, Washington, D.C., 1911.
- Leighton, F. Beach, and W. R. Cotton, *Geologic Aspects of Tentative Tract 28358, Lovejoy Buttes and Lovejoy Springs, California*. Leighton and Associates, Geotechnical and Environmental Engineering Consultants, 1967.
- Lloyd, Jay B., *Cultural Resources Survey for Stephen Sorensen Park Expansion, Los Angeles County, California*, 2005.
- Love, Bruce, *The Lovejoy Springs Site, Antelope Valley*. Paper presented at the Kelso Conference on Mojave Desert Prehistory, 1992.
- Love, Bruce, *The Archaeology at Lovejoy Buttes, Antelope Valley, Western Mojave Desert*. Paper presented at the 27th Annual Meeting of the Society for California Archaeology, 1993.

- Mehring, P.J., Jr., Prehistoric Environments. In Great Basin, edited by Warren L. d'Azevedo, pp. 31–50. Handbook of North American Indians, vol. 11, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C., 1986.
- Moratto, Michael J., *California Archaeology*. Academic Press, Orlando, 1984.
- Padon, Beth, and Bruce Love, *Phase I Archaeological Review of Site CA LAN 192 at Stephen Sorensen Community Park, Los Angeles County, California*. Discovery Works, Inc., Long Beach, California. Submitted to Los Angeles County Department of Public Works, Alhambra, California, 2004.
- Palmdale City Library, *Antelope Valley History*, <http://www.palmdalelibrary.org/history/part1.shtml>. Palmdale City Library web site, accessed January 14, 2005.
- Peak, Ann S., *Preliminary Report on the Test Excavation of Archaeological Site CA KER 322, Kern County*. On file, Southern San Joaquin Valley Information Center of the California Historical Resources Information System, California State University, Bakersfield, 1974.
- Peak, Ann S., *Final Report on the Test Excavations of Archaeological Site CA KER 322, Kern County*. On file, Southern San Joaquin Valley Information Center of the California Historical Resources Information System, California State University, Bakersfield, 1976.
- Price, Barry A., Jay B. Lloyd, Sandra S. Flint, Mary Clark Baloian, Michael Mirro, Randy Baloian, David Earle, and Alan Garfinkel, *Final Eligibility and Effects Assessment at CA LAN 192, Stephen Sorensen Park, Los Angeles County, California*. Prepared by Applied EarthWorks, Inc., Fresno, California. Prepared for Rincon Consultants, Inc., Ventura California. Submitted to Community Development Commission of the County of Los Angeles, Monterey Park, California, 2005.
- Stickel, Gary E., and Lois J. Weinman-Roberts, *An Overview of the Cultural Resources of the Western Mojave Desert*. Prepared for the United States Department of Interior, Bureau of Land Management, California Desert Planning Program, Riverside, California, 1979.
- Robinson, Roger W., *A Cultural Resources Investigation and General Assessment of Archaeological Site CA LAN 192: Located at Lovejoy Springs (Lake Los Angeles), Los Angeles County*. Submitted to Special Districts, Department of Parks and Recreation, County of Los Angeles, California, 1994.
- Robinson, Roger W., *Archaeological Investigations at CA LAN 192 (Lovejoy Springs): Final Report on Mitigation and Monitoring Associated with the Lake Los Angeles Community Park, County of Los Angeles*. Submitted to Special Districts, Department of Parks and Recreation, County of Los Angeles, 1996.

- Sutton, Mark Q., *Archaeological Investigations at KER 323 and KER 322, Edwards A.F.B., California*. On file, Southern San Joaquin Valley Information Center of the California Historical Resources Information System, California State University, Bakersfield, 1979.
- Sutton, Mark Q., *Archaeology of the Antelope Valley, Western Mojave Desert, California*. Manuscript in possession of the author, 1981.
- Sutton, Mark Q., *An Introduction to the Archaeology of the Western Mojave Desert, California*. *Archives of California Prehistory Number 14*. Coyote Press, Salinas, California, 1988.
- Tipton, Karla, *Willow Springs: An Oasis in Antelope Valley History*. Antelope Valley Press, May 25. Gold Ledge web site, <http://www.goldledge.com/history/docs.html>, accessed January 14, 2005.
- Toney, James T., *Archaeological Salvage of Site 4 LAN 192, Los Angeles County, California*. On file, South Central Coastal Information Center of the California Historical Resources Information System, California State University, Fullerton, 1968.
- Warren, Claude N., *The Desert Region*. In *California Archaeology*, by Michael J. Moratto, pp. 339–430. Academic Press, Orlando, Florida, 1984.

Chapter IV □ Geology

- California Division of Mines and Geology, *Guidelines for Evaluating the Hazard of Surface Fault Rupture, CDMG Note 49*, 1997.
- City of Palmdale, *City of Palmdale General Plan*, 1993.
- Hart, E. W., *Fault-Rupture Hazard Zones in California: Alquist-Priolo Special Studies Zones Act of 1972 with Index to Special Studies Zones Maps*. California Division of Mines and Geology, Special Publication 42, 1990, revised and updated 1997.
- Jennings, C. W., *Fault Activity Map of California and Adjacent Areas, California Division of Mines and Geologic Data Map No. 6, 1:750,000*, 1994.
- Peterson, M.D., Bryant, W.A., Cramer, C.H., *Probabilistic Seismic Hazard Assessment for the State of California, California Division of Mines and Geology Open-File Report issued jointly with United States Geological Survey, CDMG 96-08 and USGS 96-706*, 1996.
- Ponti, D.J., et al., *Map Showing Quaternary Geology of the Central Antelope Valley and Vicinity, United States, Geological Survey Open-File Report 81-0737*, 1981.
- Natural Resources Conservation Service (NRCS), *Los Angeles County Soil Map*, 1969.

Chapter V □ Hazardous Waste Sites

Environmental Data Resources (EDR), *The EDR Radius Map with GeoCheck© for Stephen Sorensen County Park, 40000 167th Street East, Palmdale, CA, 93591. Inquiry Number: 1549330.1s*, November 7, 2005.

Chapter VI □ Hydrology and Flooding Hazards

Flood Insurance Rate Map (FIRM), *Los Angeles County (Unincorporated Areas), Community-Panel Number 065043 0300 B, Panel 300 of 1275*, December 2, 1980.

Leighton Consulting, Inc. (Leighton), *Feasibility Study Proposed Leach Line Sewage Disposal Systems, Stephen Sorensen Park, Lake Los Angeles Area of Unincorporated Los Angeles County, California*, December 2, 2005.

State Water Resources Control Board (SWRCB), *Guidance for Regulation of Discharges to “Isolated” Waters*. Letter from the SWRCB Executive Office to Regional Board Executive Officers dated June 25, 2004.

U.S. Army Corps of Engineers (USACE), *Corps of Engineers Wetlands Delineation Manual. Wetlands Research Program Technical Report Y-87-1. Waterways Experimentation Station, Vicksburg, MS*, 1987.

Chapter VII □ Land Use

Bureau of Land Management (BLM), *Final Environmental Impact Report and Statement for the West Mojave Plan, A Habitat Conservation Plan and California Desert Conservation Area Plan Amendment, Volume 1A*, 2005.

County of Los Angeles, *Antelope Valley Areawide General Plan*, 1986.

County of Los Angeles, *County of Los Angeles General Plan*, 1988.

Chapter VIII □ Traffic

Rand McNally, *The Thomas Guide: 2005 San Bernardino and Riverside Counties Street Guide and Directory*. Thomas Brothers Map Design, Irvine, CA, 2005.

Chapter IX □ Utilities

City of Los Angeles Bureau of Sanitation (City of Los Angeles), *Wastewater Generation Factors*, 2001.

County of Los Angeles, Department of Health Services, Environmental Health (County of Los Angeles), *Procedures for Application for Approval of Private Sewage Disposal System Construction*, 2000.

Leighton Consulting, Inc. (Leighton), *Feasibility Study Proposed Leach Line Sewage Disposal Systems, Stephen Sorensen Park, Lake Los Angeles Area of Unincorporated Los Angeles County, California*, December 2, 2005.

CHAPTER XII

Study Preparers

A. Preparers

A.1 County of Los Angeles, Department of Public Works

The following individuals reviewed and commented on all of the documentation:

- Rene Bobadilla, Project Manager

A.2 Environmental Science Associates

The following individuals prepared the Planning Study documentation:

- Wendy Lockwood, Southern California Regional Director
- Tom Roberts, Biological Resources Director
- Tom Barnes, Project Manager
- Steven Esselman, Planner
- Jason Neilson, Graphics

A.2 Leighton Consulting, Inc.

The following individuals prepared the Percolation Feasibility report:

- Joseph Montoya, Principal Geologist
- Jeffrey Wokurka, Senior Staff Geologist

A.3 Applied Earthworks, Inc.

The following individuals prepared the Cultural Resources Phase I report:

- Barry Price, Principal Archaeologist
- Jay Lloyd, Archaeologist
- Kathleen Jernigan, Archaeologist

Appendix C

Air Quality Calculations

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\Sorensen.urb924
Project Name: Sorenson 1182007
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010 TOTALS (lbs/day unmitigated)	3.63	32.74	16.46	0.01	3.44	1.57	5.01	0.72	1.44	2.17	3,418.27
2011 TOTALS (lbs/day unmitigated)	6.11	11.38	8.67	0.00	0.01	0.98	0.99	0.00	0.90	0.91	1,205.92

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.22	0.15	1.71	0.00	0.00	0.00	153.55

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	3.92	5.76	47.43	0.04	6.75	1.34	4,039.28

6/15/2009 1:55:16 PM

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	4.14	5.91	49.14	0.04	6.75	1.34	4,192.83

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\Sorensen.urb924
Project Name: Sorenson 1182007
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
Time Slice 2/1/2010-4/30/2010 Active Days: 65	<u>3.63</u>	<u>32.74</u>	<u>16.46</u>	<u>0.01</u>	<u>3.44</u>	<u>1.57</u>	<u>5.01</u>	<u>0.72</u>	<u>1.44</u>	<u>2.17</u>	<u>3,418.27</u>
Mass Grading 02/01/2010-05/01/2010	3.63	32.74	16.46	0.01	3.44	1.57	5.01	0.72	1.44	2.17	3,418.27
Mass Grading Dust	0.00	0.00	0.00	0.00	3.40	0.00	3.40	0.71	0.00	0.71	0.00
Mass Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Mass Grading On Road Diesel	0.59	7.69	2.95	0.01	0.03	0.31	0.35	0.01	0.29	0.30	1,046.56
Mass Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 5/3/2010-7/30/2010 Active Days: 65	3.04	25.05	13.51	0.00	3.01	1.25	4.26	0.63	1.15	1.78	2,371.71
Fine Grading 05/02/2010-08/01/2010	3.04	25.05	13.51	0.00	3.01	1.25	4.26	0.63	1.15	1.78	2,371.71
Fine Grading Dust	0.00	0.00	0.00	0.00	3.00	0.00	3.00	0.63	0.00	0.63	0.00
Fine Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 8/2/2010-11/1/2010 Active Days: 66	1.25	9.36	5.80	0.00	0.01	0.58	0.59	0.00	0.54	0.54	1,023.52
Building 08/02/2010-11/01/2010	1.25	9.36	5.80	0.00	0.01	0.58	0.59	0.00	0.54	0.54	1,023.52
Building Off Road Diesel	1.21	9.16	4.81	0.00	0.00	0.58	0.58	0.00	0.53	0.53	893.39
Building Vendor Trips	0.01	0.14	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	26.63
Building Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	103.50

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Time Slice 11/2/2010-12/31/2010	2.01	12.02	8.83	0.00	0.01	1.03	1.04	0.00	0.95	0.95	1,199.85
Active Days: 44											
Asphalt 11/02/2010-04/01/2011	2.01	12.02	8.83	0.00	0.01	1.03	1.04	0.00	0.95	0.95	1,199.85
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.95	11.89	6.98	0.00	0.00	1.03	1.03	0.00	0.94	0.94	979.23
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.93
Paving Worker Trips	0.06	0.11	1.83	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.69
Time Slice 1/3/2011-4/1/2011	<u>6.11</u>	<u>11.38</u>	<u>8.67</u>	<u>0.00</u>	<u>0.01</u>	<u>0.98</u>	<u>0.99</u>	<u>0.00</u>	<u>0.90</u>	<u>0.91</u>	<u>1,205.92</u>
Active Days: 65											
Asphalt 11/02/2010-04/01/2011	1.89	11.37	8.62	0.00	0.01	0.98	0.99	0.00	0.90	0.91	1,199.80
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.83	11.26	6.91	0.00	0.00	0.98	0.98	0.00	0.90	0.90	979.23
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.93
Paving Worker Trips	0.05	0.10	1.71	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.64
Coating 01/01/2011-04/01/2011	4.22	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.12
Architectural Coating	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.12

Phase Assumptions

Phase: Fine Grading 5/2/2010 - 8/1/2010 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 0.6

Maximum Daily Acreage Disturbed: 0.15

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 2/1/2010 - 5/1/2010 - Default Mass Site Grading/Excavation Description

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Total Acres Disturbed: 3.8

Maximum Daily Acreage Disturbed: 0.17

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 246.92

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 11/2/2010 - 4/1/2011 - Default Paving Description

Acres to be Paved: 0.21

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 8/2/2010 - 11/1/2010 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2011 - 4/1/2011 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\Sorensen.urb924
Project Name: Sorenson 1182007
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010 TOTALS (tons/year unmitigated)	0.30	2.45	1.36	0.00	0.21	0.13	0.34	0.04	0.12	0.17	248.35
2011 TOTALS (tons/year unmitigated)	0.20	0.37	0.28	0.00	0.00	0.03	0.03	0.00	0.03	0.03	39.19

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.03	0.02	0.31	0.00	0.00	0.00	28.02

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.75	1.12	8.61	0.01	1.23	0.24	714.88

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.78	1.14	8.92	0.01	1.23	0.24	742.90

Greenhouse Gas (GHG) Emissions Calculations

Project Name: Sorensen Park
 ESA Proj. Number: D205237

Greenhouse Gas (GHG) Emissions from Area Sources and Vehicles

	Annual Emissions		
	pounds (lbs.)	Tons	Metric Tons
URBEMIS2007 Area Emissions	56,000	28	25
URBEMIS2007 Vehicle Emissions	1,430,000	715	649
Total Emissions (area sources + vehicles)	1,486,000	743	674

Indirect Greenhouse Gas (GHG) Emissions from Project use of Electricity (Power Plant Emissions)

Estimated Project Annual Electrical Use (net): 903,211 kWh (kilowatt hours)/year
 903 mWh (megawatt hours)/year

Indirect GHG gases	Emission Factor lb/mWh	Annual		CO2 Equivalent Factor	Annual	
		Project Electricity mWh	GHGs metric tons		CO2 Equivalent Emissions (metric tons)	
Carbon Dioxide (CO2)	878.71	903	360	1	360	
Nitrous Oxide (N2O)	0.0037	903	0.0	296	0	
Methane (CH4)	0.0067	903	0.0	23	0	
Total Indirect GHG Emissions from Project Electricity Use					361	

Total Annual Greenhouse Gas (GHG) Emission from Project Operations -- All Sources (CO2 equivalent Metric Tons)

Area Sources	25
Vehicles	649
Electrical Use	361
Total	1,035

Notes and References:

Total Emissions from Indirect Electricity Use
 Formula and Emission Factor from The California Climate Action Registry Report Protocol 2008

Pg. 33 (CCARRP) gives Equations

Pg. 37 (CCARRP) gives CO2 output emission rate (lbs/mWh)
 878.71 (lbs/mWh)

Pg. 90 (CCARRP) gives CO2 equivalency factors

Pg. 92 (CCARRP) gives Methane and Nitrous Oxide electricity emission factors (lbs/mWh)
 Methane - 0.0067 (lbs/mWh)
 Nitrous Oxide - 0.0037 (lbs/mWh)

lbs/metric ton = 2204.62

URBEMIS
Construction
 Tons
 248

Metric Tons
 225

	<u>Operations</u>	<u>construction</u>	<u>Combined</u>
25000	4.05200	0.89993	5.03813
174000000	0.00058	0.00013	0.00072
427000000	0.00024	0.00005	0.00029

Annual kWh Calculations for Project

Project Name: Sorensen Park

ESA Proj. Number: D205237

Forecast Actual Annual Electrical Use: 903,211 kWh

See Calculations Below:

Peak Demands (kVA):

Existing:	223
New Gym:	200
Total:	423

Peak Annual Electrical Use:

(kVA \times 365 \times 24)

$(423 \times 365 \times 24) \times$ 3,705,480 kWh

Forecast Actual Annual Electrical Use:

(Peak Annual Electrical Use) \times Annual Load Factor

$(3,705,480 \times .25) \times$ 926,370 kWh

Forecast Actual Annual Electrical Use minus Electricity from Solar Power

$(2.5 \times$ solar power) \times Annual Electrical Use

$(2.5 \times 926,370) \times$ 23159.25 kWh

(Annual Electrical Use) - 23159.25 kWh from solar

$(926,370 - 23,159.25) \times$ 903,211 kWh

Appendix D

SHPO Letters

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



March 22, 2005

In reply refer to:
HUD050108P

Donald Dean
Environmental Officer
Community Development Commission
Of Los Angeles County
2 Coral Circle
Monterey Park, CA 91755

RE: SECTION 106 CONSULTATION ON HUD 041105C STEPHEN SORENSEN PARK EXPANSION,
PALMDALE, LOS ANGELES COUNTY, CALIFORNIA

Dear Mr. Dean:

Thank you for your February 3, 2005 submittal that initiates consultation with me regarding the Stephen Sorensen Park Expansion Project near Palmdale, California. The Community Development Commission of the County of Los Angeles (CDC) is consulting with me in accordance with the 1999 *Programmatic Agreement Among the Community Development Commission of the County of Los Angeles, the California State Historic Preservation Officer, and the Advisory County on Historic Preservation Regarding Historic Properties Affected by Activities Performed Under the Community Development Block Grant Program, the Comprehensive Grant Program, the Emergency Shelter Grant Program, the Home Investment Partnership Program, and Other Federally Funded Programs* (PA). Thank you for consulting with me. Specifically, CDC is requesting my concurrence per Stipulation X.D.3 (b) and (c) with their finding that the proposed project will adversely affect historic properties. I understand that you also seek my approval of the data recovery and artifact disposition/curation plan that was presented in detail in the attached report prepared by Applied Earthworks, Inc. (Price et al. 2005).

Your submittal explains that the CDC and Los Angeles Department of Parks and Recreation (DPR) plans to expand the existing park from three to 15 acres in size. Proposed improvements associated with this project will include the expansion of the existing parking lot and construction of the following features: a community building of approximately 4000 square feet in size, public restroom, leach field, basketball courts, baseball diamond, soccer field, and associated walkways. I understand the project's area of potential effects (APE) to include the entire parcel proposed for development as shown in Figure 1-2 of Price's report, potentially exclusive of part of the subject site known as CA-LAN-192.

As stated in your February 2, 2005 letter, in accordance with Stipulation X.B., DPR commissioned an archaeological assessment of Stephen Sorensen Park, which included an archaeological records and literature search, as well as a Phase I pedestrian survey of the park and its environs. This investigation, performed by Padon and Love of Discovery Works, Inc. (September 2004), resulted in the discovery that the existing park was located on a portion of a large prehistoric archaeological site, CA-LAN-192. Padon and Love's 2004 investigation also revealed that "the site contained a midden deposit as much as two meters deep and during more than 50 years of exploration it has yielded numerous artifacts, archaeological features, and human remains." They concluded that the site is eligible for both the California Register of Historical Resources and the National Register of Historic Places and the proposed park expansion will occur within the boundaries of this site and cannot be redesigned to avoid the historic property.

Based on my review of Padon and Love's investigation, I feel that the identification efforts for this undertaking are adequate. However, as outlined in Stipulation VI.C.1, I would appreciate receiving for my review a copy of the DPR Form 523 for this property.

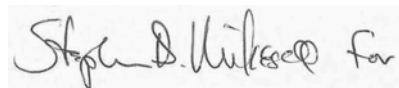
While you determined that the archaeological assessment conducted by Padon and Love was consistent with Stipulation X of the PA, their study did not provide sufficient data to allow you to define the site's content and integrity within the APE of the proposed park expansion. I acknowledge that in order to assess the project's effects on CA-LAN-192 in accordance with the Criteria of Adverse Effect outlined in 36 CFR § 800.5(a)(1), and as required by Stipulation X.D.3, you conducted additional archaeological work at the site.

Barry Price of Applied Earthworks, Inc (AE) performed this work in December 2004. Price determined that despite all prior disturbances, that intact cultural deposits are present in the southeast corner of the APE where midden deposits appear to extend beneath the capping fill, and at the northern end of the APE, to the west of the existing park in the an area slated for a new leach field (Price et al. 2004). Based on my review of Price's report (2004), I understand this property to be eligible for the National Register of Historic Places under Criteria A and D because of the important data available at CA-LAN-192 and its clear association with the late Gypsum-era florescence of cultural complexity in the Mojave Desert and possible association with late prehistoric population replacements in the area, an important event in local prehistory. While Price (2004:5.3) also concluded that CA-LAN-192 is eligible for the National Register under Criterion C as a unique type of site unusual for its size, complexity, and the content of its ground stone and ceramic assemblage, I believe that this conclusion is not as distinct and is unclear to me given the definition of Criterion C as outlined in 36 CFR § 60.4.

It is also not clear to me in the documentation that you submitted what the results of your consultation efforts undertaken with local Native American tribes were. I would appreciate receiving a synopsis of the Native American views regarding the eligibility of CA-LAN-192 and the effects of the proposed project on it.

Based on the information you provided and through consultation with my staff, I concur with your finding that "the project will adversely affect historic properties." Pursuant to Stipulation VII.A, I understand that consultation with me regarding the resolution of adverse effects to this historic property shall be initiated as set forth in 36 CFR § 800.6. The data recovery and artifact disposition/curation plan provided by your consultant is currently being reviewed and I will actively continue consultation with you and your consultant regarding the resolution of adverse effects to this historic property. I look forward to continuing our consultation. Please do not hesitate to contact Blossom Hamusek, Staff Archaeologist at (916) 651-6956 or at bhamu@ohp.parks.ca.gov, if you have any questions or need clarification of any of my comments.

Sincerely,

A handwritten signature in dark ink, appearing to read "Milford Wayne Donaldson" followed by a stylized flourish.

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



20 April 2005

In Reply Refer To
HUD050208P

Donald Dean
Environmental Officer
Community Development Commission
County of Los Angeles
2 Coral Circle
Monterey Park, California 91755

RE: FURTHER SECTION 106 CONSULTATION ON THE **PROPOSAL TO EXPAND STEPHEN SORENSEN PARK** NEAR THE CITY OF PALMDALE, LOS ANGELES COUNTY, CALIFORNIA

Dear Mr. Dean,

The purpose of this letter is to conclude consultation on the proposal to expand Stephen Sorensen Park (undertaking) under stipulation X.D.3(c) of the *Programmatic Agreement (PA) among the Community Development Commission of the County of Los Angeles, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Historic Properties Affected by Activities Performed under the Community Development Block Grant Program, the Comprehensive Grant Program, the Emergency Shelter Grant Program, the Home Investment Partnerships Program, and other Federally Funded Programs.*

I concur that the final draft of the *5.4 Recommended Treatment Measures* section of the February 2005 *Preliminary Eligibility and Effects Assessment at CA-LAN-192, Stephen Sorensen Park, Los Angeles, California* (Evaluation and Effects Assessment) is adequate as a "data recovery and artifact disposition/curation plan" under stipulation X.D.3(c) above and approve it for the use of the Community Development Commission of the County of Los Angeles. I presently possess the subject final draft in electronic format. Barry Price of Applied Earthworks, the archaeological consultant to the County of Los Angeles, last modified the draft at 12:56 p.m. on 20 April 2005. Mr. Price spoke on the telephone today with Mike McGuirt of my staff, and said that he would incorporate the final draft into the Evaluation and Effects Assessment and forward me a final copy of that latter document before 1 May 2005.

Thank you for considering the effects of the undertaking on CA-LAN-192. I believe our consultation has resulted in a resolution that well serves the historic preservation interests of your community. Please direct any questions or concerns that you may have to Mike McGuirt, Acting Chief of Project Review at 916.653.8920 or at mmcguirt@ohp.parks.ca.gov.

Sincerely,

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

MWD:mdm

Appendix E

Natural History Museum of
Los Angeles County Letter

30 November 2007

Applied EarthWorks, Inc.
5090 North Fruit Avenue, Suite 101
Fresno, CA 93711-3064

Attn: Jay B. Lloyd, Senior Archaeologist

re: Paleontological resources for the proposed Stephen A. Sorensen Park expansion, in the community of Lake Los Angeles, Los Angeles County, project area

Dear Randy:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Stephen A. Sorensen Park expansion, in the community of Lake Los Angeles, Los Angeles County, project area as outlined on the section of the Lovejoy Buttes USGS topographic quadrangle map that you sent to me via e-mail on 28 November 2007. We do not have any vertebrate fossil localities that lie within the project boundaries, but we do have localities from sedimentary deposits similar to those that occur within the proposed project area.

Bedrock in the elevated portions of the proposed project area consist of igneous rocks that, of course, will be devoid of fossils. Surface deposits in the lower lying north-central portion of the proposed project area, north of the dam, consist of soil and younger Quaternary Alluvium. These younger Quaternary Alluvium sedimentary deposits usually do not contain significant vertebrate fossils, at least in the uppermost layers. Just south of the proposed project area, however, both east and west along Avenue S from 87th Street East eastward, we have localities LACM 5942-5953 from pipeline excavations in similar Quaternary Alluvium and older Quaternary sediments that produced a fauna of small vertebrates including gopher snake, *Pituophis*, kingsnake, *Lampropeltis*, leopard lizard, *Gambelia wislizenii*, cottontail rabbit, *Sylvilagus*, pocket mouse, *Chaetodipus*, kangaroo rat, *Dipodomys*, and pocket gopher, *Thomomys*. Geological mapping indicates that the lower lying southeastern portion of the proposed project area, southeast of the dam in an area marked Lovejoy Springs (dry) has surficial deposits of Quaternary lake bed sediments. Although we do not have any vertebrate fossil localities anywhere nearby from such lacustrine deposits, they always have a good potential for producing significant vertebrate fossils.

Excavations in the igneous rocks exposed in the more elevated portions of the proposed project area will not encounter any fossils. Surface grading or very shallow excavations in the soil and younger Quaternary Alluvium exposed in the north-central portion of the proposed project area are unlikely to uncover any significant vertebrate fossils. Deeper excavations in those areas that extend down into older deposits, along with any excavations in the lacustrine deposits occurring in the southeastern portion of the proposed project area, however, may well encounter significant vertebrate fossil remains. Any substantial excavations in the sedimentary deposits in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Because some of the vertebrate fossil localities from similar sedimentary deposits have produced only very small fossils that would be missed in typical paleontological monitoring of construction projects, it is recommended that sediment samples be collected to determine the small vertebrate fossil potential in these rock units. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

A handwritten signature in cursive script, reading "Samuel A. McLeod". The signature is written in dark ink and is positioned above the printed name.

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

Appendix F

Geotechnical Report



PRELIMINARY GEOTECHNICAL INVESTIGATION REPORT PROPOSED
GYMNASIUM AND COMMUNITY BUILDING AT
STEPHEN SORENSEN COUNTY PARK, LAKE LOS ANGELES
LOS ANGELES COUNTY, CALIFORNIA

Prepared for:

Carde Ten Architects

1638 19th Street
Santa Monica, California 90404

Project Number 600804-003

May 22, 2007



Leighton Consulting, Inc.

A LEIGHTON GROUP COMPANY



Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

May 22, 2007

Project Number 600804-003

To: Carde Ten Architects
1638 19th Street
Santa Monica, California 90404

Attention: Mr. Brian Ten

Subject: Preliminary Geotechnical Investigation Report, Proposed Gymnasium and
Community Building at Stephen Sorensen County Park, Lake Los Angeles, Los
Angeles County, California.

Reference: See Appendix A

In accordance with your request and authorization, Leighton Consulting, Inc., (Leighton) has performed a preliminary geotechnical investigation to develop preliminary geotechnical recommendations for use in the preliminary design and cost estimate of the subject proposed development. The findings, conclusions, and recommendations contained within this report are based on a review of the related geologic and geotechnical literature, field explorations, laboratory testing, and relevant geotechnical analyses.

At the time this report was prepared, Leighton was only provided with the referenced Conceptual Site Plan (Carde Ten, 2007). Grading and/or foundation plans were not available. Therefore, once the proposed development plans are finalized, they should be forwarded to Leighton to verify their conformance with the preliminary recommendations presented in this report. Accordingly, these recommendations are preliminary in nature and may be revised as additional project plans are developed.


May 22, 2007

Thank you for this opportunity to be of service to you. Should you have any questions, please do not hesitate to contact the undersigned in Leighton's Santa Clarita office at 661-257-7434.

Respectfully submitted,

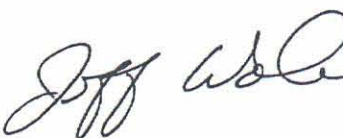
LEIGHTON CONSULTING, INC.

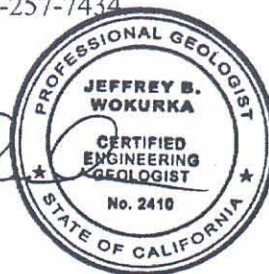

Nidham H. Al-Rayes, PE C65487
Project Engineer


John E. Haertle, GE 2352
Senior Project Engineer

NHA/JBW/JEH/JLM/dlj




Jeffrey B. Wokurka, PG, CEG 2410
Project Geologist



Leighton

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Distribution: (6) Addressee



1. INTRODUCTION

1.1 Purpose

This report presents the results of a preliminary geotechnical investigation performed by Leighton Consulting, Inc, (Leighton) for the proposed Gymnasium and Community building at The Stephen Sorensen County Park, Lake Los Angeles in the County of Los Angeles, California. The purpose of this investigation was to provide preliminary geotechnical recommendations for use in the design and cost estimate of the proposed development.

1.2 Scope

In order to develop preliminary geotechnical recommendations for use in the design and cost estimate for the proposed residential development, the following tasks were performed:

- Review of publicly available and relevant geotechnical literature for the area as well as geotechnical reports available in Leighton's library.
- Field subsurface exploration.
- Laboratory testing to assess the properties of selected samples obtained from the borings.
- Geotechnical analyses and evaluations of the following:
 - Liquefaction potential at the site;
 - Processing of soils;
 - Probable type(s) of foundations and bearing capacity evaluation;
 - Soil expansivity;
 - Soil corrosivity;
 - Foundation settlement;
 - Lateral earth pressures on retaining structures; and
 - Preliminary pavement sections.
- Preparation of this report presenting the compiled field and laboratory data, analyses, and our findings, conclusions and recommendations for design and construction of the proposed development.



1.3 Location and Site Description

The subject site is located in the Lake Los Angeles area of Unincorporated Los Angeles County, California (Figure 1). The property encompasses approximately 97 acres of relatively undeveloped land and has a gentle northeasterly gradient. The proposed gymnasium site lies directly northwest of the Stephen Sorensen Park that includes basketball courts, a baseball field, playground, large grassy areas, and park facilities. Avenue P, a two lane road, bounds the southwestern margin of the site. Existing site improvements consist of Stephen Sorensen Park, restroom facilities, sports fields and associated landscaping. Vegetation onsite consists of scattered native as well as non-native trees, annual grasses, thistles, and sagebrush.

Portions of the site were previously covered by an artificially filled lake, known as Lake Los Angeles. Lake Los Angeles has since been allowed to evaporate and dry up.

1.4 Proposed Construction

According to preliminary information provided by Carde Ten Architects, the proposed gymnasium will consist of a 13,000 square foot masonry and steel building, no greater than three-stories with a foundation design of 3,000 pounds per lineal foot (LF) for continuous footing, a slab design of 150 pounds per square foot (psf), and the maximum expected interior column load of 200 kips. At the time of preparation of this report, Leighton was provided with a Conceptual Site Plan by Carde Ten Architects, dated: February 28, 2007. The proposed grading plan and the foundations plan were not provided to Leighton.



2. FIELD EXPLORATION

Leighton drilled a total of six borings at the subject site on April 17, 2007, at the locations shown on the attached Geotechnical Map, Plate 1. Underground Service Alert (USA) was notified of Leighton's proposed subsurface exploration 48 hours in advance. The borings were drilled to depths of approximately 2 feet to 15 feet below the existing ground surface (bgs). Drilling was terminated whenever hard bedrock or refusal was encountered. The borings were drilled using a CME 75 truck-mounted drill rig utilizing a hollow stem auger. During the drilling, bulk and relatively undisturbed soil samples were obtained from the borings for laboratory testing and evaluation. After conclusion of fieldwork, the borings were backfilled with drill cuttings, which are not considered compacted fill. No utilities were damaged as a result of Leighton's subsurface exploration. Details of the field explorations performed at the site, including logs of the borings, are presented in Appendix B.



3. LABORATORY TESTS

Laboratory tests were performed on representative samples obtained from the borings. The details and results of the laboratory tests are presented in Appendix C.

The laboratory tests included Visual Soils Classification, Particle Size Analysis, In-Situ Dry Density and Moisture Content, Maximum Dry Density and Optimum Moisture Content, Expansion Index, Direct Shear test, R-Value, Consolidation and Corrosion Suite.



4. GEOLOGIC FINDINGS

4.1 Geologic Setting

The site is located within the Antelope Valley portion of the Mojave Desert Geomorphic province of California. The Antelope Valley lies within a wedge-shaped part of the Mojave Desert bounded by the San Andreas Fault to the southwest and the Garlock Fault to the northwest. The site is underlain by a thin cover of Quaternary Alluvium overlying Mesozoic granitic rocks. The site is located within a relatively flat area situated between two large outcrops of granitic bedrock and has a gentle northeast gradient.

4.2 Earth Materials

A general description of the subsurface conditions is as follows. A more detailed description of the subsurface soil conditions is presented in the boring logs included in Appendix B.

- Artificial Fill (Af): Undocumented artificial fill was not encountered within the borings, however, artificial fill may be anticipated adjacent to Avenue P and in the vicinity of the existing park site improvements.
- Quaternary Alluvium (Qal): Quaternary alluvial materials were encountered in all of the borings ranging in depth from 2 feet in B-2 to 7½ feet in B-3. The alluvial deposits were observed to consist of silty sand and sandy silt with clay. The alluvium was observed to be yellowish-brown to brown, dry to slightly moist and loose to dense. Cobbles and boulders in excess of 2 feet in diameter were encountered within the alluvium.
- Quartz Monzonite (KJqm): Mesozoic age quartz monzonite bedrock was encountered in Leighton's borings underlying the surficial alluvium. The quartz monzonite encountered was observed to be light brown, orangish-gray or grayish-tan. Weathering within the upper portion of the bedrock ranged from slightly to very weathered and hard to very hard.

4.3 Ground Water

Ground water was not encountered in Leighton's borings to the maximum drilled depth of 15 feet.



The referenced Leighton report installed and monitored groundwater wells to be utilized in the design of on-site sewage disposal systems (Leighton, 2007). Groundwater was monitored in select locations across the subject property during calendar year, 2006. Perched groundwater conditions were encountered in several locations above the alluvium to bedrock contact at depths ranging from approximately 4.5 feet on the eastern portion of the property to 16.6 feet in depth approximately 750 feet northwest of the currently proposed site improvements. Five of the seven monitoring wells did not encounter groundwater to depths ranging from 17.1 feet to 30 feet.

The historic high groundwater reported in the Seismic Hazard Report for the Lovejoy Buttes 7.5-Minute Quadrangle ranges from approximately between 10 to 20 feet in the vicinity of the subject site, (CGS, 2004b).

4.4 Landslides

No landslides were observed at the time of Leighton's field exploration. Additionally, the subject site is not located within a Earthquake Induced Landslides Zone as mapped by the California Geological Survey, (CGS, 2004a).

4.5 Faulting

No active faults have been mapped at, or are known to project towards, the project site. The project site does not lie within an Alquist-Priolo Earthquake Fault Zone, (APEFZ): (Hart and Bryant, 1999; CGS, 2000).

For the purposes of providing seismic design for planned construction, active faults in California have been designated as seismic sources and classified as Type A, B, or C faults. Type A faults are those that are capable of producing a Maximum Moment Magnitude Earthquake of $M_w > 7.0$ and have a slip rate of greater than 5 mm/year. Type C faults are those that are only capable of producing an earthquake with a Maximum Moment Magnitude of less than 6.5 and have a slip rate of less than 2 mm/year. Type B faults are those which have a Moment Magnitude and slip rate characteristics in between those of Type A and Type C faults. Seismic sources of Type C classification have not been designated in California because they have been judged not to have a significant impact on seismic design.

The nearest Seismic Source Type A Fault to the site is the San Andreas Fault (1857 rupture) at a distance of approximately 16.6 km to the southwest of the site (Jennings, 1994; Blake, 1999). The nearest Seismic Source Type B Fault is the Clamshell-Sawpit Fault located approximately 32.6 km south of the project site (Blake, 1999).



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4.6 Liquefaction

The subject site is located within an area that has the potential to liquefy as mapped by the California Geological Survey, (CGS, 2004a). Per the liquefaction study presented in Section 6.2 below, the potential of liquefaction-induced structural damage is low, provided that the relevant recommendations presented in this report are implemented.

4.7 Seismicity

Within a 100-kilometer search-radius, the closest historically known earthquake to have affected the site since 1800, occurred in 1946 and is approximately 23 km from the subject site, with a magnitude of 4.1, and generated a ground horizontal acceleration of 0.05g. The largest earthquake magnitude found in the same search-radius was 7.0, which is located at approximately 31 kilometers from the subject site, and generated a ground horizontal acceleration of 0.195g (Blake, 2000 EQSEARCH).



5. GEOTECHNICAL FINDINGS

5.1 Subsurface Conditions

While artificial fill soils were not encountered in Leighton's borings, artificial fills may be anticipated adjacent to Avenue P and in the vicinity of the existing park site improvements.

Quaternary alluvium was encountered in Leighton's borings to depths ranging from 2 feet to 7½ feet below existing grade. These soils consisted of silty sand and sandy silt with clay. The soils encountered were yellow brown to brown, dry to slightly moist and loose to medium dense. These materials are not suitable for the support of structures and/or engineered fill, and therefore should be removed. However, these materials may be incorporated in the engineered fill after removing deleterious and over-size materials.

The Quaternary alluvium was underlain by weathered to competent hard granitic rock. No subsurface exploration was deemed necessary beyond the alluvium to bedrock contact. The competent bedrock is suitable for the support of structures and/or engineered fill. It should be noted that some difficulties may be experienced when processing this type of hard bedrock.

The relevant seismic hazards report (CGS, 2004b) classifies the native soils at the subject site as unconsolidated medium to coarse-grained sediments representing deposition during late Pleistocene to Holocene (Q6m). The aforementioned report also describes these soils on the alluvial fan and colluvial materials, as being weakly developed. These soils are underlain, according to the same report, by a granitic batholith (gr).

5.2 Expansion Potential

Existing cohesive on-site soils encountered in our borings have medium expansion potential according to the test performed on a sample at a depth of 7 feet below the existing ground surface. Additional testing is required during construction to further assess the expansivity of the subgrade soils in direct contact with the slabs and other flatworks.

5.3 Shrinkage Potential

Relevant tests on selected samples of on-site soils indicated that a minimum 90% compaction would result in approximately 10% shrinkage. Additional tests should be performed during the rough grading plan review to better evaluate the shrinkage percentage.



5.4 Soil Corrosivity

Soil pH: A pH level less than 5.5 is considered detrimental to concrete. The test results from a representative on-site soil sample indicated a negligible potential for corrosion due to soil pH.

Sulfate Content: High concentrations of soluble sulfate in soils can cause deterioration of concrete in contact with the soils. Based on the sulfate content of the tested soil sample, concrete in direct contact with existing on-site soils may have the potential to experience a moderate sulfate exposure.

Chloride Content: Soils with chloride concentrations higher than 500 parts per million (ppm) are considered corrosive to steel and concrete. The tested soil sample indicated a negligible amount of chlorides with respect to corrosion of steel or deterioration of concrete.

Minimum Resistivity: The lower the electric resistivity of soils, the more is the potential of damage inflicted on metals in contact with the soils. Based on the Resistivity test result on a selected representative soil sample, buried metals may have the potential to be exposed to severe corrosivity.



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6. SEISMIC HAZARD ASSESSMENT

6.1 Probabilistic Seismic Hazard Assessment

The design-basis earthquake is a ground motion that has a 10% probability of exceedance in a 50-year time period, that is, a ground motion with an average 475-year return period. In order to estimate this ground motion, a probabilistic seismic hazard analysis (PSHA) was performed for the site using the computer program FRISKSP (Blake, 2000). The PSHA considered various magnitudes of earthquakes that major active or potentially active faults within a 100-km radius of the site could produce along their respective fault lengths. The attenuation relationships of Boore, et al. (1997), Campbell (1997, 2000), and Sadigh, et al., (1997) were used in the analyses. The assessment was performed using a central representative location of 34.6052° N latitude and 117.8312°W longitude for the site, and assuming that the foundations will be established in structural fill. If the foundations are deepened so that they are established in competent bedrock, additional assessment will be provided. The following table summarizes the calculated peak horizontal ground acceleration (PHGA) values, non-magnitude weighted and magnitude weighted for $M_w = 7.5$, for the project site:

Attenuation Relationship	PHGA (Non-Magnitude-Weighted)	PHGA ($M_w = 7.5$)
Boore et al., (1997), 250 m/s	0.53g	0.47g
Campbell (1997, 2000), alluvium	0.48g	0.43g
Sadigh, et al., (1997), deep soil	0.43g	0.37g
Recommended Average Estimated PHGA	0.48g	0.42g

6.2 Liquefaction Potential and Seismic Settlement

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. The subject site is within a potential liquefaction hazard zone (CGS, 2004a). Therefore, a liquefaction evaluation for this project is required. Pertinent subsurface findings, assumptions and results of our liquefaction evaluation are discussed below:



- Groundwater: Although historic high groundwater table is reported to be approximately at 10 feet below ground surface (CGS 2004b), groundwater was not encountered in any of our borings to the maximum drilled depth of 15 feet.

Leighton's prior groundwater monitoring on the subject property encountered perched groundwater in several locations above the alluvium to bedrock contact at depths ranging from approximately 4.5 feet on the eastern portion of the property to 16.6 feet in depth approximately 750 feet northwest of the currently proposed site improvements. Five of the seven monitoring wells did not encounter groundwater to depths of 17.1 feet to 30 feet.

- Soil Type: The granular soils, encountered in our borings, were generally loose and, therefore; may be susceptible to liquefaction. Accordingly, these soils are not suitable to provide support for the proposed structures. As presented in the *Recommendations* section, these soils should be removed until competent bedrock is exposed. These soils may be utilized in the structural fill, after removing over-size and other deleterious materials.

It is Leighton's opinion, based on the above and upon engineering judgment, the probability of damaging liquefaction occurring at the site during a 30-year project life is extremely low, provided that Leighton's recommendations are implemented.



7. FINDINGS AND CONCLUSIONS

Based on our field explorations, laboratory testing, and geologic and engineering analyses, it is our opinion that the proposed development at the subject site is feasible from a geotechnical point of view provided that the geotechnical recommendations contained in this report are followed and are incorporated into the design and construction of the project

- Soils overlying competent bedrock are not suitable for the support of the proposed structures and; therefore, should be removed. However, they may be incorporated in the structural fill after removing organic and other deleterious materials.
- All of Leighton's borings were terminated when the drilling rig was unable to penetrate the bedrock and drill rig auger refusal was encountered. Excavation difficulty during grading is a function of the degree of weathering and jointing or fracturing within the bedrock. Hard, unweathered or slightly weathered zones can occur at random locations and depths and may be encountered during grading.
- This site is not located within an Alquist-Priolo Earthquake Fault Zone and there is no evidence to suggest that active or potentially active faults exist on, or trend towards, the subject site. Therefore, structural damage resulting from on-site fault rupture is unlikely.
- The subject site is not located within an Earthquake Induced Landslides Zone as mapped by the California Geological Survey, (CGS, 2004a). Additionally, no apparent active landslides were observed during Leighton's field exploration.
- The site is mapped in a liquefaction zone (CGS, 2004a). Nevertheless, the potential for liquefaction-induced structural damage will be significantly reduced by implementing Leighton's recommendations.
- The potential of groundwater adversely impacting the proposed development is unlikely. Perched groundwater may be encountered during grading requiring grading mitigation and/or additional recommendations.
- The potential for concrete damage due to sulfate exposure is considered moderate.
- The on-site soils are considered severely corrosive to buried metals.
- Existing cohesive on-site soils have a medium expansion potential.
- Conventional shallow foundations may be used for the support of the proposed structures, provided that the Leighton's recommendations are implemented.
- Some difficulties may be experienced when processing the hard bedrock.



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8. RECOMMENDATIONS

8.1 General

The preliminary recommendations presented in this report are based upon our field subsurface explorations and laboratory tests. As discussed earlier, once the development plans are finalized, they should be forwarded to this office to verify their conformance with the recommendations presented in this report. These recommendations will also be reviewed during construction, and may be revised, if the exposed surfaces are significantly different than those encountered during this subsurface exploration.

Leighton's preliminary recommendations are for design and cost estimate purposes only, safety in the field and compliance with Cal-OSHA requirements are the responsibility of the grading contractor.

8.2 Review of Plans

As the relevant plans are finalized, they should be forwarded to the geotechnical consultant, for review and verification of conformance with the intent of these recommendations, prior to the commencement of construction. These plans include, but are not limited to, grading and Drainage, Foundation, Retaining Walls, etc.

8.3 Grading

It is anticipated that grading will consist of cut/fill operations to establish the proposed building pads. It is expected that grading may be accomplished with conventional earthmoving equipment. However, hard, unweathered zones may be encountered within the bedrock, especially considering the presence of bedrock as shallow as 2 feet below grade at the location of Boring B-2. Some difficulties may be experienced while processing this type of hard bedrock. Grading should be performed in compliance with the requirements of Chapter 70 of the County of Los Angeles Building Code (LABC).

8.3.1 Site Clearing and Removals

Prior to grading and construction, vegetation should be stripped and trees should be removed in accordance with the regulations of the governing agency. Surface obstructions, miscellaneous debris, and other deleterious materials should also be removed.



The removed materials may be incorporated in the structural fill provided organic materials and similar deleterious materials are removed. Organic and deleterious materials should be hauled away from the site and properly disposed of in a method acceptable to the governing agencies and the Geotechnical Consultant. If potentially hazardous materials are encountered, the Contractor should stop work in the affected area, and a hazardous material specialist should evaluate these materials and provide recommendations for handling them prior to continuing to work in that area.

8.3.2. Overexcavation

Foundation and grading plans were not available at the time this report was prepared. Nevertheless, and if it is intended to utilize conventional shallow foundations to support the proposed structures, then the existing upper soils should be removed until competent bedrock is exposed in the area of the proposed structures. The overexcavation should be extended at least 5 feet beyond the exterior face of the planned footings. The removed soils may be placed as structural fill under the observation of the Geotechnical Engineer-of-Record. If the exposed subgrades beneath footings and slab-on-grade stretches over cut and fill materials, the cut areas should be overexcavated by a minimum of 3 feet and 1 foot beneath the subgrades of footings and the slab-on-grade, respectively. If other types of footings are planned, then additional recommendations may be provided. As an alternative, and to reduce the hardship that may result from processing the hard bedrock, raised floors may be considered, so that the foundations and the slab-on-grade are supported by structural fill placed over competent bedrock.

8.3.3. Temporary Excavations

The soils encountered at the subject site are not expected to stand vertically for any significant length of time in cuts over 3 feet high. Where the necessary space is available, temporary (less than 30 days) unsurcharged embankments up to about 15 feet in height may be sloped back at 1 H to 1 V (horizontal to vertical) without shoring. The Geotechnical Engineer of Record should be contacted for specific recommendations if deeper excavations are required. Adjacent to existing buildings, temporary excavations should not extend below a 1 to 1 plane extending downward from the adjacent footings. Where there is insufficient space, shoring for temporary excavations will be required.

Where sloped embankments are used, the tops of the slopes should be barricaded to prevent vehicles and storage loads within 7 feet of the tops of the slopes. A greater setback may be necessary when considering heavy vehicles, such as concrete trucks and cranes; we should be advised of such heavy vehicle loadings so that specific setback requirements can be established.

If the temporary construction embankments are to be maintained during the rainy season, berms are recommended along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces.



All applicable safety requirements and regulations, including OSHA regulations, should be met. Where there is insufficient room for sloped excavations, shoring will be required.

8.3.4 Preparation of Areas Receiving Structural Fill

Prior to placing fill, exposed competent bedrock at the bottom of excavations, observed by a Certified California Engineering Geologist, should be scarified to depths of approximately 6 to 8 inches, moisture conditioned to between 110% and 120% of optimum moisture content, and compacted to at least 90% of the maximum dry density obtainable using the ASTM D 1557 method of compaction.

Holes and depressions resulting from the removal of trees, buried obstructions and/or oversize rocks that extend below finished site grades or in zones of overexcavation should be backfilled with compacted fill.

8.3.5 Fill Material

Existing on-site soils may be incorporated into the structural fill after removing organic matter and other deleterious substances. The removed soils should be mixed thoroughly, prior to placement, to achieve relevant uniformity and consistence for the planned engineered fill.

If import soils, which should be of granular nature, are planned to be used, samples of those soils and the locations of their source areas should be provided to the Geotechnical Consultant at least 48 hours (2 working days) before importing to the site so that appropriate tests can be performed and the materials be evaluated for suitability for use at the site.

8.3.6 Oversize Materials

Oversize material, defined as rock or other irreducible material with a maximum dimension greater than 8 inches should not be buried or placed in the fill unless the locations, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations should be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted fill. Oversize material should not be placed within 10 vertical feet of finish grade and 15 feet from the face of a slope, or within 5 feet of future utilities or underground construction.



8.3.7 Fill Placement and Compaction

Approved fill materials should be moisture conditioned to between 110% to 120% of optimum moisture content and thoroughly mixed for uniformity of moisture and materials at the time of compaction. The materials should be placed in generally even horizontal layers not exceeding 8 inches in thickness prior to compaction, and compacted to at least 90% relative compaction.

Placing the new fill material should be performed in a manner that it will be properly and sufficiently bonded into existing older structural fill and/or competent native soils.

8.3.8 Manufactured Slope

Cut and fill slopes should not be manufactured at steeper than 2 Horizontal : 1 Vertical. Fills slopes should be supported on, and benched into, competent bedrock. Cut slopes should expose competent bedrock. The slopes should be planted or otherwise protected from erosion.

8.4 Foundations

Conventional shallow footings established in structural fill, or in competent bedrock, may be used for the support of proposed building structures. Due to the granular nature of on-site soils, forming may be required.

Planters should not be sited adjacent to foundations. Where planters can not be avoided, measures to minimize the potential for water seeping beneath the foundations should be implemented. Such measures could include providing area drains, deepening the foundations or providing sealed bottom planters.

The following recommendations are minimal; therefore, the project's structural engineer should review and provide additional recommendations, if necessary, based upon the final planned loading.

Bearing Capacity: An allowable bearing capacity of 2,500 pounds per square foot (psf), may be used in the design of footings with a minimum width of 18 inches and a minimum embedment in compacted fill, or bedrock, of 24 inches. The bearing value may be increased by 250 psf for every additional foot of depth and/or width; however, the maximum allowable bearing capacity should not exceed 4,000 psf. It should be noted that relatively higher bearing capacities may be provided if the foundations are deepened so that they are established in competent bedrock. The recommended bearing capacity may also be increased by one third for wind and seismic loading.



While the actual bearing value of new fill placed at the site will depend on the materials used and the compaction methods employed, the quoted bearing value will be applicable if acceptable soils are used and are compacted as recommended. The bearing value of the fill should be confirmed during grading.

Embedment depths should not be allowed to be affected adversely, such as through erosion, softening, digging, etc. The Geotechnical Engineer should review the foundation plans and loads.

Settlement: Per the structural loading information provided by Carde Ten Architects, Leighton anticipates that the static settlement to be less than 1 inch. The differential settlement is expected to be less than ½ inch and occur over a minimum span of 30 feet. Based upon Leighton experience with granular soils similar to those encountered in the borings, it is anticipated that the majority of the estimated settlement will occur during construction.

Lateral Resistance: Lateral loads may be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.35 may be used between the footings and the floor slabs, and the supporting soils. The passive resistance of soils may be assumed to be equivalent to a fluid pressure of 350 pcf and may be increased to a maximum of 3,500 psf. A one-third increase in the passive value may be used for wind or seismic loads. The frictional resistance and the passive resistance of the soils may be combined by provided the passive pressure value is reduced by 1/3.

Foundation Setback: Foundation embedment should comply, as minimum, with the setback requirements set forth in the Article 1806.5 and Figure 18-I-1 of the LABC.

Foundation Observation: To verify the presence of satisfactory soils at foundation design elevations, the foundation excavations should be observed by the Geotechnical Consultant before placing reinforcing steel. The excavations should be deepened as necessary to extend into satisfactory soils. Where the foundation excavations are deeper than 5 feet, the sides of the excavations should be sloped back at ¾V to 1H or shored for safety.

Inspection of foundation excavations may also be required by the appropriate reviewing governmental agencies. The contractor should be familiar with the inspection requirements of the reviewing agencies.

Other Foundation Alternatives: If it is desired to reduce the quantity of earthworks, the proposed structures may derive their support from a foundation that is deepened to be established in competent bedrock. Specific geotechnical parameters and recommendations for this type of foundation, as well as other types of foundations, will be provided upon request, and based on the review of the final proposed grading plan.



8.5 Floor Slab Support

If the subgrade soils are prepared per our recommendations in the grading section above, the building floor slabs may be supported on grade. However, construction activities and exposure to the environment may cause deterioration of the prepared subgrade. Therefore, the Geotechnical Consultant should observe the condition of the final subgrade soils immediately prior to slab-on-grade construction and, if necessary, perform further density and moisture content tests to determine the suitability of the final prepared subgrade.

The subgrades should be presoaked to achieve a moisture content corresponding to approximately 110% of the optimum moisture content (ASTM D1557 standard) to a minimum depth of 12 inches below the subgrade elevation.

Floor slabs supported on grade should be at least 4 inches thick and reinforced with No. 4 steel reinforcing bars spaced at 16 inches maximum on-centers in orthogonal directions. The Project Structural Engineer may provide equivalent, or alternate recommendations based upon the final planned loading.

If moisture-sensitive floor coverings are planned, the floor slabs in those areas should be constructed in a manner to decrease the potential of water vapor migration through the slabs. A vapor retarder consisting of a minimum 10-mil-thick impermeable membrane should underlie the floor slabs beneath areas of moisture-sensitive floor covering. Care should be taken to avoid damage to the membrane and to seal the membrane around utilities and other penetrations. The recommendations of the manufacturer of the vapor retarder, the project architect, and the structural engineer should be complied with pertaining placing sand above and/or below the vapor retarder.

8.6 Soil Corrosivity and Sulfate Content

As discussed earlier, buried metals may be susceptible to severe corrosivity. Additional testing should be performed during construction. Retaining a corrosion specialist is recommended to provide relevant mitigation measures that should be implemented in accordance with the governing plumbing code.

Moderate sulfate exposure, for concrete in direct contact with existing on-site soils, is anticipated according to the relevant test results. Therefore, and according to Table 19-A-4 of the 2002 County of Los Angeles Building Code (LABC), a cement Type II may be used in the concrete mix that should be designed to provide a minimum compressive strength of 4,000 psi. Further testing should be performed during and after the completion of grading to verify the potential for sulfate exposure of concrete in direct contact with on-site soils.



8.7 Seismic Site Coefficients

As per the Los Angeles County Building Code, for a representative point located at 34.6052° N Latitude and 117.8312° W Longitude, and assuming that the foundations will be established in structural fill, the following seismic site coefficients and factors apply to lateral-force design for structures at the site. If the foundations are deepened so that they are established in competent bedrock, additional parameters will be provided.

SEISMIC ZONE, Z	0.4
SOIL PROFILE TYPE	S_D
Near-Source Factor N_a	1.0
Near-Source Factor N_v	1.0
Seismic Coefficient C_a	0.40
Seismic Coefficient C_v	0.56
Period, T_o	0.11
Period, T_s	0.56

8.8 Retaining Walls

The following recommendations are applicable to the design and construction of retaining walls that do not exceed 12 feet in height:

1. The equivalent fluid pressure at the back of the wall will vary from 35 pounds per square foot per foot depth (psf/ft) for a level backfill to 45 psf/ft for a 2V:1H ascending slope at the top of the subject proposed wall.
2. The above mentioned values do not include surcharges generated from traffic and/or any additional loads within the setback zone. Thus, surcharge values should be added to the equivalent fluid pressure if any of the aforementioned loads exist in the setback zone.
3. A 2,500 pounds per square feet (psf) allowable bearing pressure may be used for the design of the footings. The minimum embedment of the footings, in competent native soils and/or structural fill, should not be less than 18 inches below the lowest adjacent grade and should meet the minimum setback requirements set forth of LABC Figure 18-1-1.
4. For the structural design of the walls, the bulk density of the soil over footing slabs may be taken as 125 pcf.
5. A 400 pound per square foot per foot depth passive earth pressure, starting from one foot below the adjacent proposed grade, along with a 0.35 coefficient of friction, may be used in the design of the subject walls. Where both friction and passive resistance are utilized in the design, the passive pressure values should be reduced by one-third. These values may be assumed to be ultimate values.



6. The hydrostatic pressure should be relieved from the back of the wall by installing a 4-inch diameter PVC pipe (Schedule 40), with two rows of staggered perforations, at the bottom of the back of the wall, encased in a minimum of 1-cubic feet of free draining $\frac{3}{4}$ inch gravel per lineal foot of length. A minimum thickness of 4 inches of gravel should be placed at all of the sides of the pipe. A geofabric filter, such as MIRAFI 140 NC, should wrap the gravel to provide separation from the adjacent soils.
7. As a substitute for the $\frac{3}{4}$ -inch free draining gravel and the geofabric filter, Class 2 permeable material or equivalent may be used with slotted pipe.
8. An unobstructed outlet should be provided at the lower end of each segment of the subdrain. This outlet should drain into a suitable collective drainage facility.
9. To minimize seepage through the wall, the back of the wall should be waterproofed.
10. Positive surface drainage should be provided and maintained to direct surface water away from the wall and towards suitable collective drainage facilities. Where the backfill is not level, a V-ditch should be provided at the top of the wall along with a minimum 12-inch deep freeboard. Surface water should not be allowed to pond adjacent to or flow over the wall surface in an uncontrolled manner.
11. Heavy equipment should not be used operated close to the walls when placing backfill unless the walls are braced properly.
12. Granular on-site soils may be used for the backfill behind the walls. Any import materials should be granular. The top 18 inches of the backfill should be relatively impermeable.
13. All relevant CAL-OSHA requirements should be considered during both the design and construction phases.
14. The plans should be submitted to this office for review and approval prior to commencing construction.
15. Footing excavations, subdrain systems and wall backfill should be observed and approved by a representative of this office.



8.9 Pavement Design

Based on laboratory testing performed on representative near-surface soil samples, a conservative R-value of 40 was used for the preliminary pavement section calculation. Based on the design procedures outlined in the current Caltrans Highway Design Manual, and using a design R-value of 78 for aggregate base course, preliminary flexible pavement sections may consist of the following for the Traffic Indices indicated. Local agency's more conservative minimum thickness requirements will supersede the following recommended sections. Final pavement design should be based on laboratory testing performed near the completion of grading and the Traffic Index determined by the project civil engineer.

Traffic Index	Asphalt Concrete (inches)	Aggregate Base (inches)
4.0	3.0	4.0
5.0	4.0	4.0
6.0	4.0	6.0

8.10 Utility Trench Backfill

In general, the requirements for bedding and backfill as presented in the Standard Specifications for Public Works Construction (The "Greenbook") may be used. Bedding material should consist of granular soils that exhibit a Sand Equivalent (SE) of not less than 30 and should be placed in manner as such a minimum cover of 12 inches will be placed above the pipe. Bedding material should be compacted manually; jetting may be utilized only for the densification process of the granular shading materials.

Existing on-site soils may be used for trench backfill, placed over the granular bedding layer, provided they are free of organic materials and rocks over 6 inches in greatest dimension. Fill material should be placed in 6- to 8-inch thick loose lifts and should be compacted to at least 90 percent relative compaction (ASTM D 1557-00) by mechanical means only. Care should be taken not to damage utility lines.

Trenches should be located so as not to impair the bearing capacity or cause settlement under or adjacent to foundations. As a guide, trenches subparallel to foundations should not extend below a 1:1 plane below the bottoms of the foundations.

All work associated with trench excavation should conform to the State of California Safety Code (OSHA).



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8.11 Surface Drainage

Positive surface drainage should be provided and maintained to direct surface water away, through nonerodible drainage devices, from structures and slopes and towards the street or other suitable collective drainage facilities at all times. In no case should the surface water be allowed to pond adjacent to buildings, behind the retaining walls or flow over the slope surfaces in an uncontrolled manner.

Inadequate control of runoff water or heavy irrigation may result in shallow groundwater conditions and seepage where previously none existed. Maintaining adequate surface drainage, proper disposal of runoff water and control of irrigation will minimize the potential of adverse structural impact resulting from oversaturated soils.

8.12 Preventive Slope Maintenance

As discussed earlier, the subject project plans were not available at the time this report was prepared. However, if cut and/or fill slopes are planned, then the potential of geotechnical hazards including mudslides, spalling of slopes, erosion and concentrated flows, should be considered. It must be emphasized that responsible maintenance of these slopes, and the property in general, by the owner, using proper methods, can reduce the risk of these hazards significantly. The property owner should implement a program of slope maintenance. This program should include annual cleanout of drains, elimination of gophers and earth burrowing rodents, and maintaining low water consumptive, fire retardant, deep-rooted ground cover with proper irrigation.

8.13 Geotechnical Observation and Testing

Proposed construction involves various activities that should be observed and tested during placement by a representative of our firm. This representative should have at least the following duties:

- Observation of the clearing and grubbing operations for proper removal of unsuitable materials;
- Observation of Excavations and Backcuts;
- Observation of the exposed subgrade in areas to receive fill and in areas where excavation has resulted in the desired finished subgrade, observation of proof-rolling, and delineation of areas requiring overexcavation;
- Subdrain installation;



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- Visual observation to evaluate the suitability of on-site and import soils, if any required, for fill placement;
- Collection and submittal of soil samples for laboratory testing where necessary;
- Observation of the placement of compacted fill and backfill for uniformity during placement;
- Field density and compaction testing to determine the percentage of compaction achieved during fill placement;
- Observation and probing of foundation materials to confirm that suitable bearing materials are present at the design foundation depths.

These and other soils related activities should be observed and tested by a qualified representative of the geotechnical consultant on a continual basis together with reviewing construction activities for the above items and for special needs or as questions arise.

The governmental agencies having jurisdiction over the project should be notified prior to commencement of grading so that the necessary grading permits may be obtained and arrangements may be made for required inspection(s).



9. LIMITATIONS

Leighton's work was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional opinions included in this report.

As in many projects, conditions revealed in excavations may be at variance with preliminary findings. If this occurs, the geotechnical consultant should evaluate the changed conditions and additional recommendations be obtained, as warranted.

The identification and testing of hazardous, toxic or contaminated materials were outside the scope of Leighton's work. Should such materials be encountered at any time, or their existence be suspected, and all measures stipulated in local, County, State and Federal regulations, as applicable, should be implemented.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the necessary design consultants for the project and incorporated into the plans; and that the necessary steps are taken to see that the contractors carry out such recommendations in the field.

The findings of this report are considered valid as of the report's date. However, changes in the condition of a property can occur with the passage of time, whether due to natural processes or the work of man on the subject or adjacent properties. In addition, changes in standards of practice may occur from legislation or the broadening of knowledge. Accordingly, the findings of this report may at some future time be invalidated wholly or partially by changes outside Leighton's control.

The conclusions and recommendations in this report are based in part upon data that were obtained from a necessarily limited number of observations, site visits, drillings, samples and tests. Such data are strictly applicable only with respect to the specific locations explored, and therefore may not completely define all subsurface conditions throughout the site. The nature of many sites is that differing geotechnical or geological conditions can occur within small distances and under varying climatic conditions. Furthermore, changes in subsurface conditions can and do occur over time. Therefore, the findings, conclusions and recommendations presented in this report can be relied upon only if Leighton has the opportunity to observe the subsurface conditions during grading and construction of the project, in order to verify that our preliminary findings are representative of the site.

This report is intended only for the use of Carde Ten Architects and his representatives, and only as related expressly to the subject proposed project.



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10. CLOSURE

If parties other than Leighton are engaged to provide construction geotechnical services, they must be notified that they will be required to assume complete responsibility for the geotechnical phase of the project by concurring with the findings and recommendations in this report or by providing alternative recommendations.

Any persons using this report for bidding or construction purposes should perform such independent investigations as they deem necessary to satisfy themselves as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on the subject site.





**PROPOSED GYMNASIUM AND
COMMUNITY BUILDING
STEPHEN SORENSEN PARK
LAKE LOS ANGELES, CA**

SITE LOCATION MAP

Project No.
600804-003
Date
May 2007



Figure 1

APPENDIX A

REFERENCES



APPENDIX A

REFERENCES

- Blake, T.F., 1999, UBCSEIS, A Computer Program for the Estimation of Seismic Coefficients, version 1.03.
- _____, 2000, FRISKSP, A Computer Program for the Probabilistic Estimation of Peak Acceleration and Uniform Hazard Spectra Using 3-D Faults as Earthquake Sources, version 4.0.
- _____, 2000, EQSEARCH, A Computer Program that provides a List of the Main Features of Earthquakes that took place in a specified time period, version 3.00a.
- Boore, D. M., Joyner, W. B., and Fumal, T. E., 1997, "Equations for Estimating Horizontal Response Spectra and Peak Acceleration from Western North American Earthquakes: A Summary of Recent Work," *Seismological Research Letters*, Seismological Society of America, Vol. 68, No. 1 (January/February 1997), pp. 128-153.
- California Geological Survey (CGS), 1997, Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California. Adopted on March 13, 1997.
- _____, 1999, Recommendations Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction in California, March 1999.
- _____, 2000, Digital Images of Official Maps of Alquist-Priolo Earthquake Faults Zones of California, Southern California Region, DMG CD 2000-004, dated 2000.
- _____, 2004a, Seismic Hazard Zones Map, Lovejoy Buttes Quadrangle, Official Map, dated April 19, 2004.
- _____, 2004b, Seismic Hazard Zone Report for the Lovejoy Buttes 7.5-Minute Quadrangle, Los Angeles County, California, Seismic Hazard Zone Report 086, dated 2004 and last revised on October 10, 2005.
- Campbell, K., 1997, "Empirical Near-Source Attenuation Relationships for Horizontal and Vertical Components of Peak Ground Acceleration, Peak Ground Velocity, and Pseudo-Absolute Acceleration Response Spectra," *Seismological Research Letters*, Seismological Society of America, Vol. 68, No. 1 (January/February 1997), pp. 154-179.
- Campbell, K., 2000, "Erratum, Empirical Near-Source Attenuation Relationships for Horizontal and Vertical Components of Peak Ground Acceleration, Peak Ground Velocity, and Pseudo-Absolute Acceleration Response Spectra," *Seismological Research Letters*, Seismological Society of America, Vol. 71, No. 3 (May/June 2000), pp. 353-355.



APPENDIX A

REFERENCES (continued)

- CARDE TEN Architects, Conceptual Site Plan, Stephen Sorensen County Park Phase III, Gymnasium and Community Building, Scale 1" : 40', dated February 28, 2007.
- Hart, E.W., Bryant, W. A., 1999, Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning with Index to Earthquake Zones Maps: Department of Conservation, Division of Mines and Geology, Special Publication 42. Revised 1997, Supplements 1 and 2 added 1999.
- Leighton Consulting Inc., 2007, Groundwater Monitoring Results, Fourth Quarter 2006, Stephen Sorensen Park, Lake Los Angeles Area of Unincorporated Los Angeles County, California, project number 600804-002, dated January 29, 2007.
- Jennings, C.W., 1994, Fault Activity Map of California and Adjacent Areas With Locations and Ages of Recent Volcanic Eruptions: State of California, Department of Conservation, Division of Mines and Geology, Geologic Data Map No. 6, Scale of 1:750,000.
- Sadigh, K., Chang, C.-Y., Egan, J. A., Makdisi, F., and Youngs, R. R., 1997, "Attenuation Relationships for Shallow Crustal Earthquakes Based on California Strong Motion Data," Seismological Research Letters, Seismological Society of America, Vol. 68, No. 1 (January/February 1997), pp. 180-189.



APPENDIX B
FIELD EXPLORATION PROGRAM



APPENDIX B

FIELD EXPLORATION

B-1 General

Leighton's personnel performed site reconnaissance to mark subsurface exploration locations. Dig Alert was called over 48 hours before the start of exploration, and a visual survey was conducted to verify that the proposed boring locations would not encounter subsurface utility lines. No underground lines were encountered during excavation.

B-2 Excavation and Sampling

Subsurface conditions were explored by drilling 6 hollow stem auger borings (B-1 through B-6) to a maximum depth of approximately 15 feet bgs. The approximate locations of the borings are shown on the Geotechnical Map, Plate 1.

Bulk and ring samples were obtained at the depths indicated on the boring logs. The relatively undisturbed ring samples were obtained by driving a Modified California Split-Spoon Sampler into different elevations of the boring hole. The Bulk samples were obtained from the excavated materials.

The sampling rings are 2.41 inches inside diameter (ID) and 1 inch high. The ring samples were placed in plastic cans, labeled, and transported to the laboratory in cushioned containers. The bulk samples were transported in labeled plastic bags.

B-3 Miscellaneous

Leighton representatives, who also supervised drilling operations and collected the soil samples, logged the boring holes. Visual observations were made of the materials at each sampling depth. The earth materials were classified visually, in substantial accordance with the Unified Soil Classification System (USCS). The logs of the boring holes are presented in this appendix. The boring holes were backfilled with drill cuttings. Ground water was not encountered in any of the borings drilled to a maximum depth of 15.9 feet.

FIGURES

Logs of Exploratory Borings B-1 through B-6



GEOTECHNICAL BORING LOG B-1

Date 4-17-07

Project Stephen Sorensen County Park-Gymnasium Site

Drilling Co. Martini Drilling

Hole Diameter 8" Drive Weight 140 lbs



Elevation Top of Hole ~2704' Location See Geotechnical Map

Sheet 1 of 1

Project No. 600804-003

Type of Rig Hollow-Stem

Drop 30"

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	DESCRIPTION	Type of Tests
									Logged By <u>CBC</u> Sampled By <u>CBC</u>	
0								SM	<u>ALLUVIUM (Oal):</u> Silty SAND / Sandy SILT with Clay, yellow brown to brown, dry, loose, fine to coarse grained, some coarse gravel, trace cobbles and boulders (up to 2' in diameter)	
5				R-1	50/6"				Silty SAND, light brown, dry, hard, contains roots, weathered granite in tip of sampler, partial sample	
				B-1 S-2	50/3"		3.2		<u>QUARTZ MONZONITE (KJqm):</u> Quartz Monzonite, orange-gray, dry, hard and very weathered	
10				R-2	50/5"	101.5	6.3		Quartz Monzonite, brown, dry, hard, slightly weathered	
15									Drilled to 10.5' Terminated due to drill rig refusal No groundwater encountered Boring backfilled with cuttings	
20										
25										
30										

SAMPLE TYPES:

S SPLIT SPOON
R RING SAMPLE
B BULK SAMPLE
T TUBE SAMPLE

G GRAB SAMPLE
C CORE SAMPLE

TYPE OF TESTS:

DS DIRECT SHEAR
MD MAXIMUM DENSITY
CN CONSOLIDATION
CR CORROSION
HCO HYDRO COLLAPSE

SA SIEVE ANALYSIS
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RV R-VALUE
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LEIGHTON CONSULTING INC.

GEOTECHNICAL BORING LOG B-2

Date 4-17-07

Project Stephen Sorensen County Park-Gymnasium Site

Drilling Co. Martini Drilling

Hole Diameter 8" Drive Weight 140 lbs

Elevation Top of Hole ~2701' Location See Geotechnical Map

Sheet 1 of 1

Project No. 600804-003

Type of Rig Hollow-Stem

Drop 30"

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	DESCRIPTION	Type of Tests
	0	N S						SM	<p>Logged By <u>CBC</u></p> <p>Sampled By <u>CBC</u></p> <p>ALLUVIUM (Qal): Silty SAND / Sandy SILT with Clay, yellow brown to brown, dry, loose, fine to coarse grained, some coarse gravel, trace cobbles</p> <p>QUARTZ MONZONITE (KJqm): Quartz Monzonite, medium brown, dry, hard to very hard, slightly weathered</p> <p>Drilled to 2' Terminated due to drill rig refusal No groundwater encountered Boring backfilled with cuttings</p>	
	5									
	10									
	15									
	20									
	25									
	30									

SAMPLE TYPES:

S SPLIT SPOON

R RING SAMPLE

B BULK SAMPLE

T TUBE SAMPLE

TYPE OF TESTS:

DS DIRECT SHEAR

MD MAXIMUM DENSITY

CN CONSOLIDATION

CR CORROSION

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LEIGHTON CONSULTING INC.

GEOTECHNICAL BORING LOG B-3

Date 4-17-07

Project Stephen Sorensen County Park-Gymnasium Site

Drilling Co. Martini Drilling

Hole Diameter 8" Drive Weight

140 lbs

Elevation Top of Hole ~2702' Location

See Geotechnical Map

Sheet 1 of 1

Project No. 600804-003

Type of Rig Hollow-Stem

Drop 30"

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	DESCRIPTION	Type of Tests
									Logged By CBC Sampled By CBC	
0				B-1				SM	<u>ALLUVIUM (Qal):</u> Silty SAND / Sandy SILT with Clay, yellow brown to brown, dry, loose, fine to coarse grained, some coarse gravel, trace cobbles and boulders (up to 2' in diameter), contains iron oxide staining and calcium carbonate stringers	
5				S-1	2 2 5			SM/SC	CLAY / Decomposed GRANITE, orange, white or brown, slightly moist, medium stiff Sandy CLAY, light brown to brown, slightly moist, stiff, fine to medium grained with trace coarse sand, Fe and calcium carbonate staining, very weathered granite in tip (gravel: 17%; sand: 72%; passing no. 200 sieve: 11%)	
				R-1	50/6"	103.1	16.7			
10				S-2	50/2"				<u>QUARTZ MONZONITE (KJqm):</u> Quartz Monzonite, brown, hard, slightly weathered	
15				R-2	50/bounce		3.5			
20									Drilled to 15' Terminated due to drill rig refusal No groundwater encountered Boring backfilled with cuttings	
25										
30										

SAMPLE TYPES:

S SPLIT SPOON
R RING SAMPLE
B BULK SAMPLE
T TUBE SAMPLE

G GRAB SAMPLE
C CORE SAMPLE

TYPE OF TESTS:

DS DIRECT SHEAR
MD MAXIMUM DENSITY
CN CONSOLIDATION
CR CORROSION
HCO HYDRO COLLAPSE

SA SIEVE ANALYSIS
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LEIGHTON CONSULTING INC.

GEOTECHNICAL BORING LOG B-4

Date 4-17-07

Sheet 1 of 1

Project Stephen Sorensen County Park-Gymnasium Site

Project No. 600804-003

Drilling Co. Martini Drilling

Type of Rig Hollow-Stem

Hole Diameter 8" Drive Weight 140 lbs

Elevation Top of Hole ~2704' Location See Geotechnical Map

Drop 30"

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	DESCRIPTION	Type of Tests
									Logged By <u>CBC</u> Sampled By <u>CBC</u>	
0				B-1				SM/ML	<u>ALLUVIUM (Qal):</u> Silty SAND / Sandy SILT with Clay, yellow brown to brown, dry, loose, fine to coarse grained, some coarse gravel, trace cobbles and boulders (up to 2' in diameter), contains iron oxide staining and calcium carbonate stringers	
5				S-1	50/6"				<u>QUARTZ MONZONITE (KJam):</u> Quartz Monzonite, gray, hard, very weathered	
				R-1	50/5"	92.3	3.6			
10									Drilled to 7.5' Terminated due to drill rig refusal No groundwater encountered Boring backfilled with cuttings	
15										
20										
25										
30										

SAMPLE TYPES:

S SPLIT SPOON

R RING SAMPLE

B BULK SAMPLE

T TUBE SAMPLE

TYPE OF TESTS:

DS DIRECT SHEAR

MD MAXIMUM DENSITY

CN CONSOLIDATION

CR CORROSION

HCO HYDRO COLLAPSE

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LEIGHTON CONSULTING INC.

GEOTECHNICAL BORING LOG B-5

Date 4-17-07

Sheet 1 of 1

Project Stephen Sorensen County Park-Gymnasium Site

Project No. 600804-003

Drilling Co. Martini Drilling

Type of Rig Hollow-Stem

Hole Diameter 8" Drive Weight 140 lbs

Drop 30"

Elevation Top of Hole ~2706' Location See Geotechnical Map

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	DESCRIPTION	Type of Tests
		N S							Logged By CBC Sampled By CBC	
0								SP/SM	<u>ALLUVIUM (Qa)</u> : Silty SAND / Sandy SILT with Clay, yellow brown to brown, dry, loose, fine to coarse grained, some coarse gravel, trace cobbles and boulders (up to 2' in diameter), contains iron oxide staining and calcium carbonate stringers	
5				S-1	50/6"					
				B-1					<u>QUARTZ MONZONITE (KJqm)</u> : Quartz Monzonite, grayish tan, dry, hard, very to moderately weathered	
				R-1	40 50/5"	128.9	4.8			
10				S-2	13 41 50/4"					
15				R-2	11 50/3"					
20									Drilled to 15.9' Terminated due to drill rig refusal No groundwater encountered Boring backfilled with cuttings	
25										
30										

SAMPLE TYPES:

S SPLIT SPOON
R RING SAMPLE
B BULK SAMPLE
T TUBE SAMPLE

G GRAB SAMPLE
C CORE SAMPLE

TYPE OF TESTS:

DS DIRECT SHEAR
MD MAXIMUM DENSITY
CN CONSOLIDATION
CR CORROSION
HCO HYDRO COLLAPSE

SA SIEVE ANALYSIS
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LEIGHTON CONSULTING INC.

GEOTECHNICAL BORING LOG B-6

Date 4-17-07

Project Stephen Sorensen County Park-Gymnasium Site

Drilling Co. Martini Drilling

Hole Diameter 8" Drive Weight 140 lbs

Elevation Top of Hole ~2706' Location See Geotechnical Map

Sheet 1 of 1

Project No. 600804-003

Type of Rig Hollow-Stem

Drop 30"

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	DESCRIPTION	Type of Tests
									Logged By <u>CBC</u> Sampled By <u>CBC</u>	
0								SP/SM	<u>ALLUVIUM (Qal):</u> Silty SAND / Sandy SILT with Clay, yellow brown to brown, dry, loose, fine to coarse grained, some coarse gravel, trace cobbles and boulders (up to 2' in diameter), contains iron oxide staining and calcium carbonate stringers	
5				R-1	50/4"		4.6			
				B-1						
				S-1	50/1"				<u>QUARTZ MONZONITE (KJqm):</u> Quartz Monzonite, grayish tan, dry, hard to very hard, slightly to moderately weathered	
10									Drilled to 7.1' Terminated due to drill rig refusal No groundwater encountered Boring backfilled with cuttings	
15										
20										
25										
30										

SAMPLE TYPES:

S SPLIT SPOON
R RING SAMPLE
B BULK SAMPLE
T TUBE SAMPLE

G GRAB SAMPLE
C CORE SAMPLE

TYPE OF TESTS:

DS DIRECT SHEAR
MD MAXIMUM DENSITY
CN CONSOLIDATION
CR CORROSION
HCO HYDRO COLLAPSE

SA SIEVE ANALYSIS
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LEIGHTON CONSULTING INC.

APPENDIX C
LABORATORY TEST PROGRAM



APPENDIX C

LABORATORY TEST PROGRAM

C-1 General

The laboratory test program comprised the testing of selected representative specimens, prepared from representative samples of the earth materials, to obtain the following properties and characteristics: particle size analysis, in-situ moisture content and dry density; maximum dry density and optimum moisture content; consolidation; Atterberg limits; direct shear strengths; R-value; sulfate content, pH, minimum resistivity, and chloride content.

The laboratory tests were performed in substantial accordance with the applicable procedures of: American Society for Testing and Materials (ASTM), Department of Transportation, Standard Test Methods (CTM); and Uniform Building Code Standards (UBC Standard), as relevant.

C-2 Soil Classification: Visual Method (ASTM D2488)

Classifying soils in accordance with standardized methods enables their properties and characteristics to be evaluated in a broad-based manner, and to correlate soils found on various sites. Visual classifications made in the field are often refined after more detailed observations of the materials are made in the laboratory, and after subsequent laboratory testing.

The classifications made in respect of selected soil samples are shown on the Boring and Trench Logs in Appendix B. Because the types of in-situ materials may change abruptly, there may be apparent discrepancies between the classifications as indicated on the logs and in the test-result documentation.

C-3 Particle Size Analysis (ASTM D 422 & ASTM D1140):

ASTM D 422 test establishes the distribution, within a specimen of the soil, of soil particles of given sizes. One specimen was tested. Graph of the gradation, in terms of the percent weights of the material passing sieves of specified sizes, are included in this appendix.

Selected soil samples were wet-wash sieved through a No. 200 U.S. Standard brass sieve in accordance with ASTM Test Methods D 1140 to determine the percent fines (silts and clays). This data was used to refine the Unified Soil Classification for tested soil samples. The results of these tests are presented in the test data sheets in this appendix.



C-4 In-Situ Dry Density and Moisture Content (ASTM D 2937, 2216)

The in-situ dry density provides a measure of the degree of densification of a material, while the moisture content serves to establish a correlation between the properties and behavior of a soil.

The in-situ dry density (in lb/ft³) and moisture content (as a percentage of dry weight of soil) were determined for relatively undisturbed specimens. The results are presented on the Boring and Trench Logs (Appendix B).

C-5 Maximum Dry Density and Optimum Moisture Content (ASTM D 1557)

This test establishes the relationship between varying moisture contents and dry density when the soil is compacted under standardized conditions. The maximum dry density achievable under these conditions, and the corresponding (optimum) moisture content, are then obtained. One bulk sample was tested and the result is attached to this Appendix.

C-6 Consolidation (ASTM D 2435)

The consolidation test measures the change in thickness of a soil specimen that is laterally confined by a ring as successively increasing normal loads are applied using an oedometer. Water is added during the test to illustrate the affect of moisture on the specimen. One undisturbed sample was tested. The test result is presented in this appendix.

C-7 Atterberg Limits (ASTM D 4318)

The plasticity of the soils is used in classification of the soils and is indicative of their expansion potential and shear strength. One test was performed on a selected sample. The results of the test is presented in this appendix.

C-8 Direct Shear Strength (ASTM D 3080)

The shear strength of earth materials is obtained by successively shearing separate specimens partially contained within rings, utilizing a direct-shear machine. Varying normal pressures are applied, and the perpendicularly applied stress required to shear the specimen is recorded. The cohesion (c, in lb/ft²) and angle of internal friction (ϕ , in degrees) are then calculated: these constitute the shear strength characteristics of the material. The shearing stress is applied at a constant rate of strain. In order to simulate possibly adverse moisture conditions, the specimens are soaked prior to the test, and are sheared under water. The tests were performed on a bulk sample remolded to 90% of their maximum dry density, and on an undisturbed ring sample. The test result is presented in the appendix.



C-9 R-Value tests (ASTM D 2844)

The resistance R-value was performed to assess the performance of compacted soils when placed in a road subjected to traffic. One bulk sample was tested. The result is presented in this Appendix.

C-10 Soil Corrosivity

The corrosivity of one specimen taken from a bulk sample was evaluated. The following tests for corrosivity were performed and the results are attached to this Appendix.

Soluble Sulfate Content (CTM 417): The soluble sulfate content of a soil is determined to evaluate the potential for concrete deterioration when it is in contact with the soil. The sulfate content is expressed in terms of parts per million (ppm) or as a percentage of weight of soil.

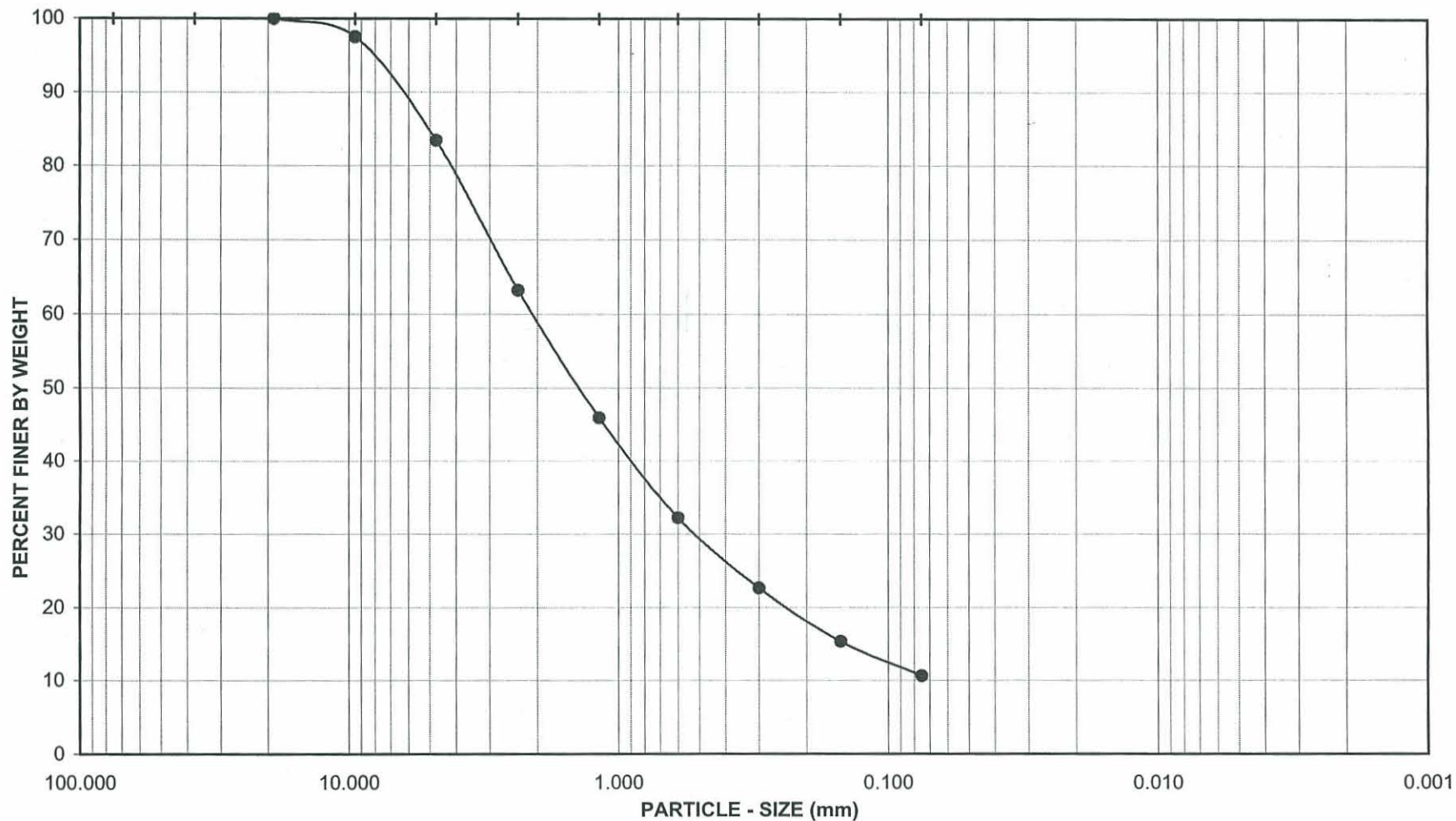
P^H (CTM 532): A p^H level less than 5.5 is considered detrimental to concrete.

Minimum Resistivity (CTM 643): The resistivity of a soil measures the corrosivity of the soil to ferrous metals. Lower the resistivity, higher the corrosion potential of the soil. Soils with a resistivity value below 1,000 ohm-cm are considered severely corrosive to ferrous metals.

Chloride Content (CTM 422): The presence of chloride with concentration in excess of 0.05 percent is considered corrosive to concrete and steel.



GRAVEL					SAND						FINES		
COARSE		FINE			COARSE	MEDIUM		FINE		SILT		CLAY	
U.S. STANDARD SIEVE OPENING					U.S. STANDARD SIEVE NUMBER						HYDROMETER		
3.0"	1 1/2"	3/4"	3/8"	#4	#8	#16	#30	#50	#100	#200			



Project Name: Stephen Sorrenson Park

Project No.: 600804-003

Exploration No.: B-3

Sample No.: R-1

Depth (feet): 7.0

Soil Type : (SW-SM)g

Soil Identification: Brown well-graded sand with silt and gravel (SW-SM)g

GR:SA:FI : (%) **17 : 72 : 11**

Apr-U/



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**PARTICLE - SIZE
DISTRIBUTION
ASTM D 422**



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MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name: Stephen Sorrenson Park Tested By : RDS Date: 04/20/07
 Project No.: 600804-003 Input By : LF Date: 04/27/07
 Boring No.: B-4 Depth (ft.) 0-5
 Sample No. : Bag-1
 Soil Identification: Pale brown silty, clayey sand (SC-SM)

Preparation Method:	<input checked="" type="checkbox"/>	Moist	Scalp Fraction (%)	Rammer Weight (lb.) =	10.0
		Dry	#3/4	Height of Drop (in.) =	18.0
Compaction Method:	<input checked="" type="checkbox"/>	Mechanical Ram	#3/8		
		Manual Ram	#4	Mold Volume (ft ³)	0.03321

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	3818.0	3915.0	3840.0			
Weight of Mold (g)	1786.0	1786.0	1786.0			
Net Weight of Soil (g)	2032.0	2129.0	2054.0			
Wet Weight of Soil + Cont. (g)	457.00	460.10	426.20			
Dry Weight of Soil + Cont. (g)	431.60	424.80	386.60			
Weight of Container (g)	54.10	53.90	51.40			
Moisture Content (%)	6.73	9.52	11.81			
Wet Density (pcf)	134.9	141.3	136.4			
Dry Density (pcf)	126.4	129.0	121.9			

Maximum Dry Density (pcf) **129.5**Optimum Moisture Content (%) **8.5**Corrected Dry Density (pcf) **132.5**Corrected Moisture Content (%) **8.0**☒ **Procedure A**

Soil Passing No. 4 (4.75 mm) Sieve
 Mold : 4 in. (101.6 mm) diameter
 Layers : 5 (Five)
 Blows per layer : 25 (twenty-five)
 May be used if + #4 is 20% or less

☐ **Procedure B**

Soil Passing 3/8 in. (9.5 mm) Sieve
 Mold : 4 in. (101.6 mm) diameter
 Layers : 5 (Five)
 Blows per layer : 25 (twenty-five)
 Use if + #4 is >20% and + 3/8 in. is 20% or less

☐ **Procedure C**

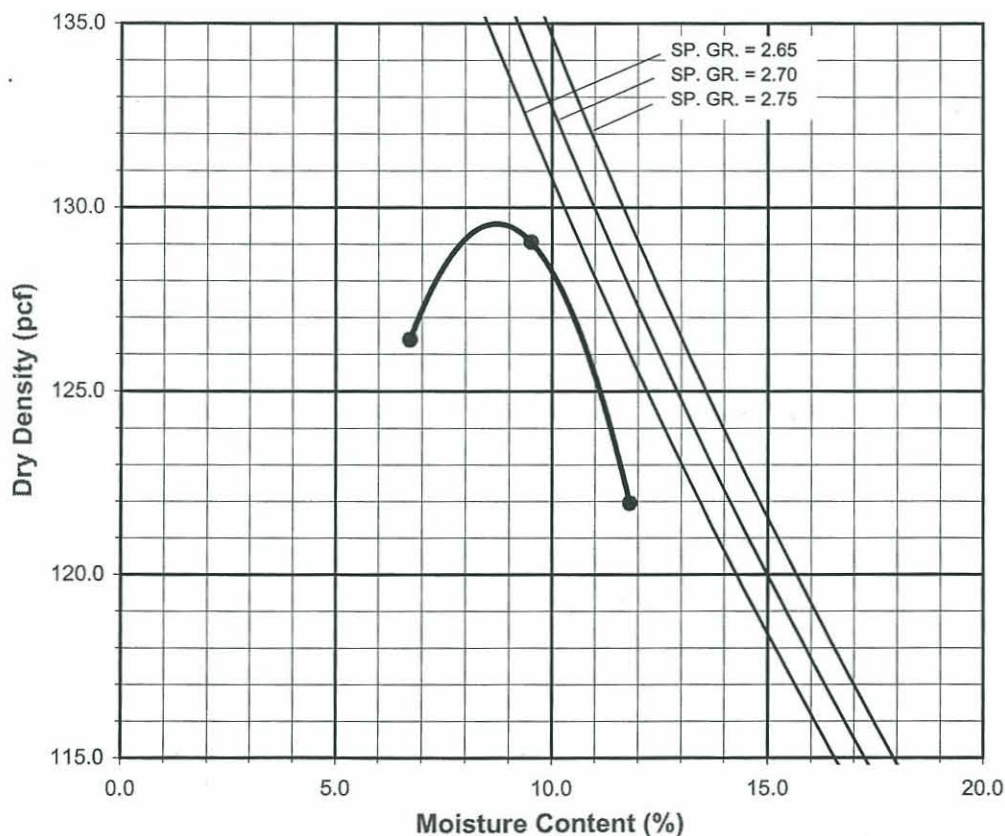
Soil Passing 3/4 in. (19.0 mm) Sieve
 Mold : 6 in. (152.4 mm) diameter
 Layers : 5 (Five)
 Blows per layer : 56 (fifty-six)
 Use if + 3/8 in. is >20% and + 3/4 in. is <30%

Particle-Size Distribution:

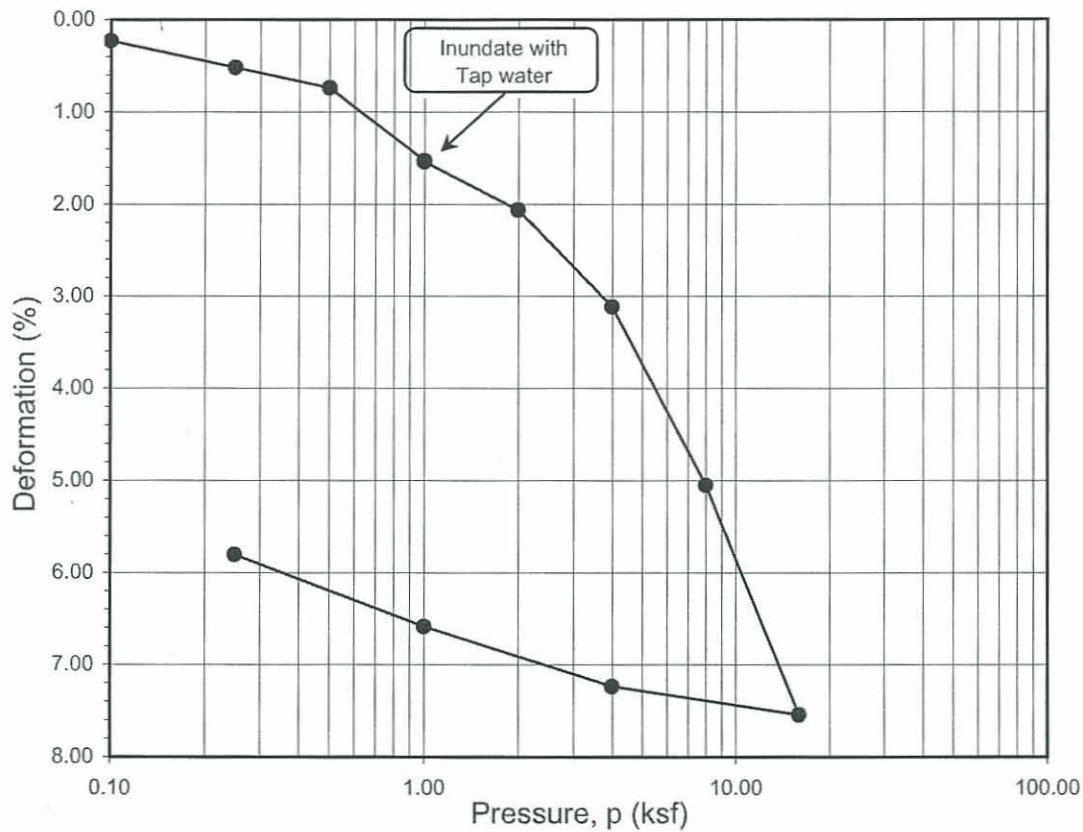
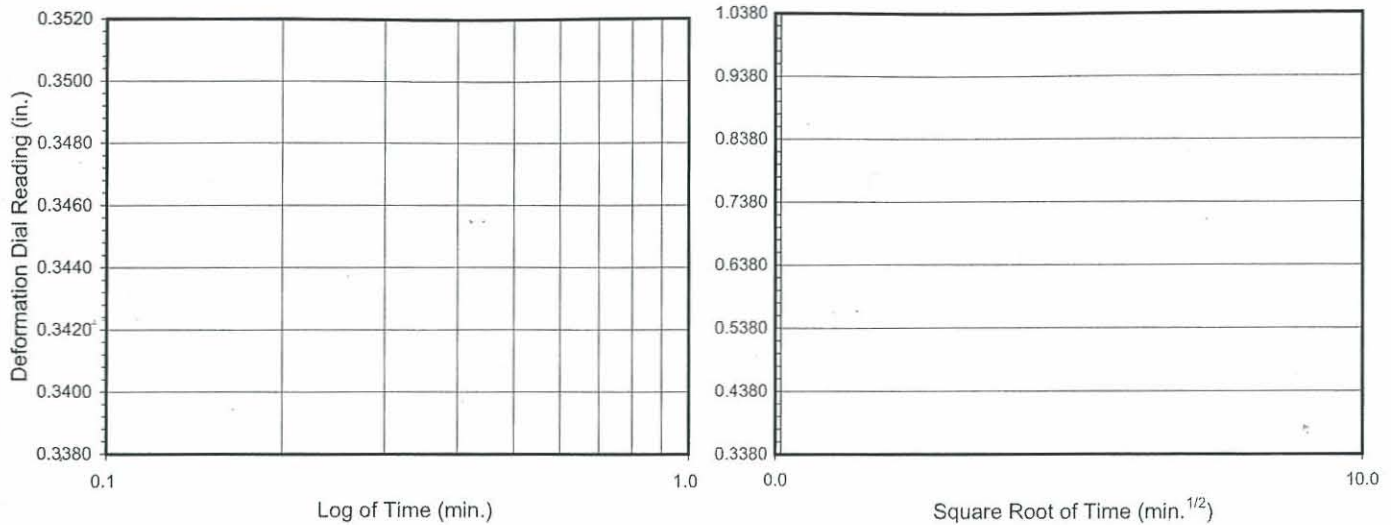
GR:SA:FI

Atterberg Limits:

LL, PL, PI



No Time Readings



Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
B-3	R-1	7	16.7	16.1	108.0	116.2	0.561	0.470	80	96

Soil Identification: Brown sandy lean clay s(CL)



ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS (ASTM D 2435)

Project No.: 600804-003

Stephen Sorrenson Park

04-07



ASTM D 4318

Date: 04/27/07

Date: 04/30/07

Checked By: JHW

Depth (ft.) 7.0

Soil Identification: Brown sandy lean clay s(CL)

Note: test was performed on the clayey portion of the sample

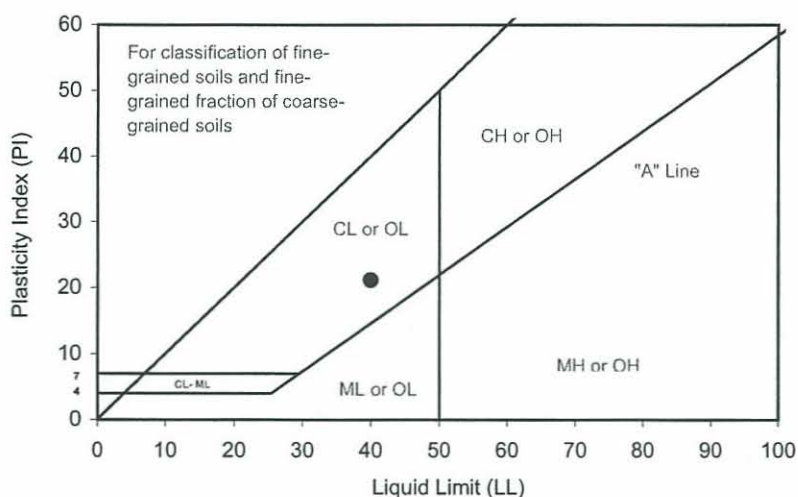
TEST	PLASTIC LIMIT		LIQUID LIMIT			
NO.	1	2	1	2	3	4
Number of Blows [N]			35	27	18	
Wet Wt. of Soil + Cont. (g)	16.12	15.83	15.43	14.39	15.93	
Dry Wt. of Soil + Cont. (g)	13.72	13.49	11.53	10.61	11.53	
Wt. of Container (g)	1.04	1.05	1.04	1.04	1.02	
Moisture Content (%) [W _n]	18.93	18.81	37.18	39.50	41.86	

Liquid Limit	40
Plastic Limit	19
Plasticity Index	21
Classification	CL

PI at "A" - Line = 0.73(LL-20)	14.6
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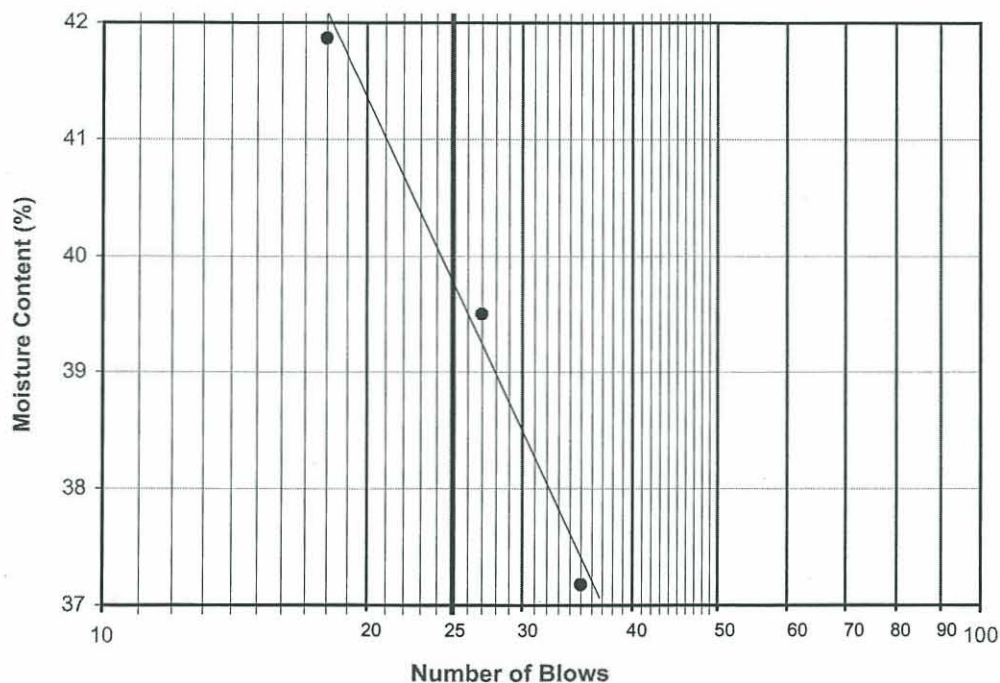
One - Point Liquid Limit Calculation

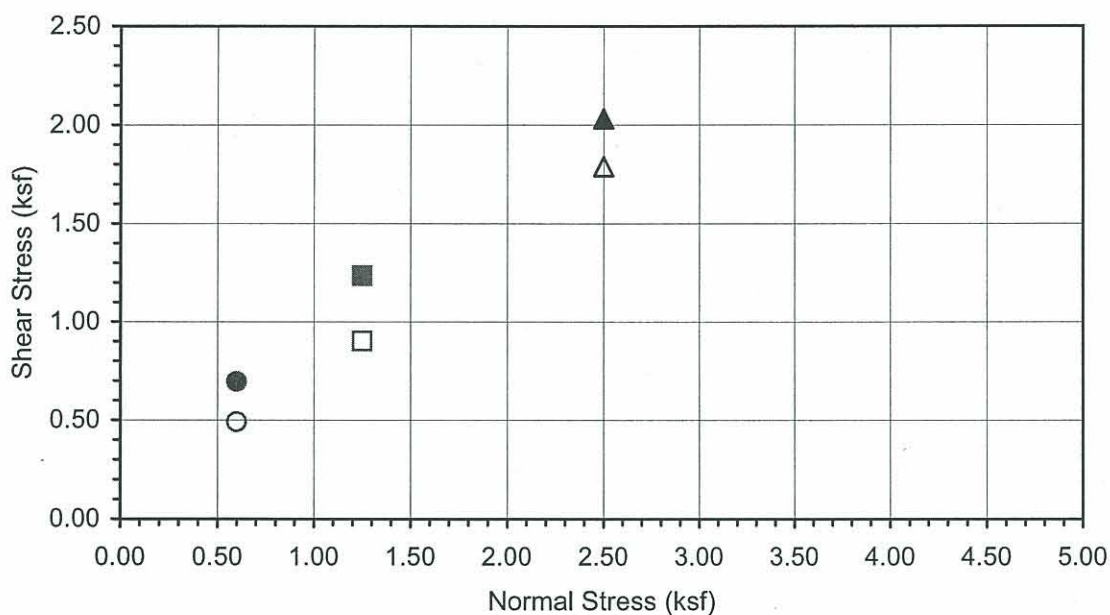
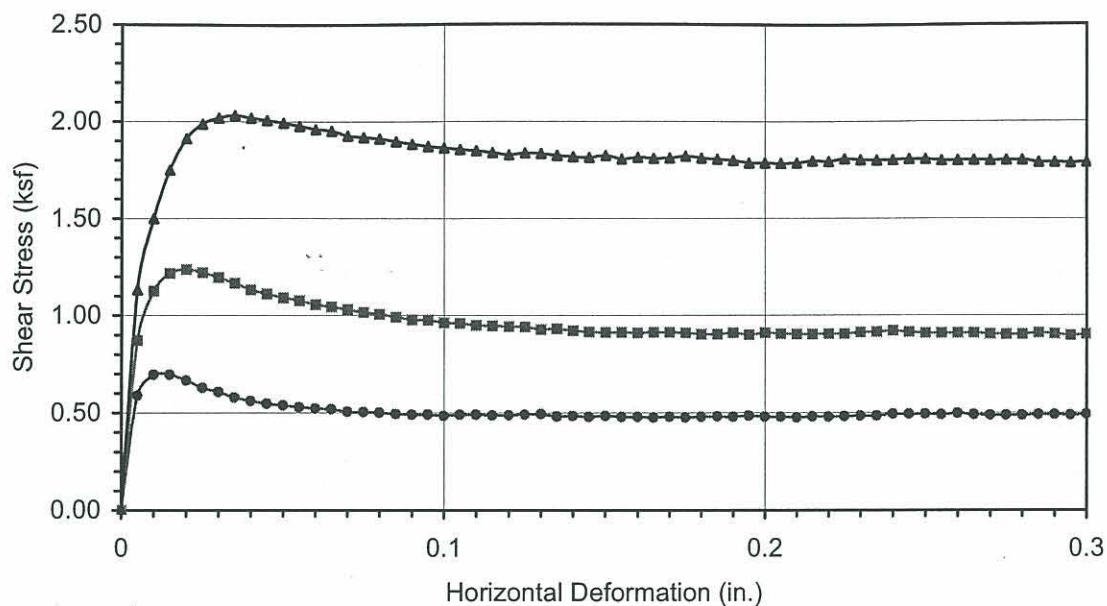
$$LL = Wn(N/25)^{0.12}$$



PROCEDURES USED

- ☐ Wet Preparation
Multipoint - Wet
- ☒ Dry Preparation
Multipoint - Dry
- ☒ Procedure A
Multipoint Test
- ☐ Procedure B
One-point Test





Boring No.	B-4
Sample No.	Bag-1
Depth (ft)	0-5
<u>Sample Type:</u>	
90% Remold	
<u>Soil Identification:</u>	
Pale brown silty, clayey sand (SC-SM)	

Normal Stress (kip/ft ²)	0.600	1.250	2.500
Peak Shear Stress (kip/ft ²)	● 0.695	■ 1.236	▲ 2.031
Shear Stress @ End of Test (ksf)	○ 0.490	□ 0.902	△ 1.789
Deformation Rate (in./min.)	0.0500	0.0500	0.0500
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	8.40	8.40	8.40
Dry Density (pcf)	116.8	116.8	116.8
Saturation (%)	51.1	51.1	51.1
Soil Height Before Shearing (in.)	0.9976	0.9922	0.9900
Final Moisture Content (%)	15.0	14.5	14.3



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DIRECT SHEAR TEST RESULTS

Consolidated Undrained

Project No.:

600804-003

Stephen Sorrenson Park

04-07



R-VALUE TEST RESULTS

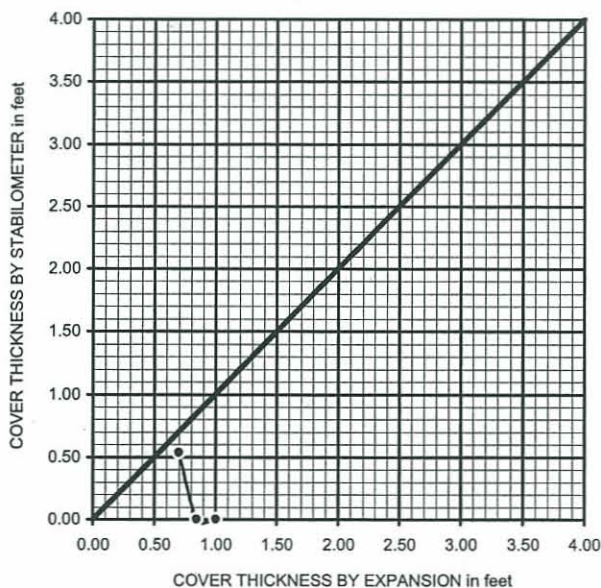
PROJECT NAME: Stephen Sorrenson Park
SAMPLE NUMBER: Bag-1
SAMPLE DESCRIPTION: Si.Sa.

PROJECT NUMBER: 600804-003
SAMPLE LOCATION: B-3 @ 0-5'
TECHNICIAN: SCF
DATE COMPLETED 4/24/2007

TEST SPECIMEN	a	b	c
MOISTURE AT COMPACTION %	12.5	12.7	13.0
HEIGHT OF SAMPLE, Inches	2.43	2.62	2.54
DRY DENSITY, pcf	121.6	119.8	118.3
COMPACTOR PRESSURE, psi	75	50	50
EXUDATION PRESSURE, psi	321	224	159
EXPANSION, Inches x 10exp-4	16	0	0
STABILITY Ph 2,000 lbs (160 psi)	43	58	69
TURNS DISPLACEMENT	5.07	5.38	5.54
R-VALUE UNCORRECTED	57	45	37
R-VALUE CORRECTED	56	47	37

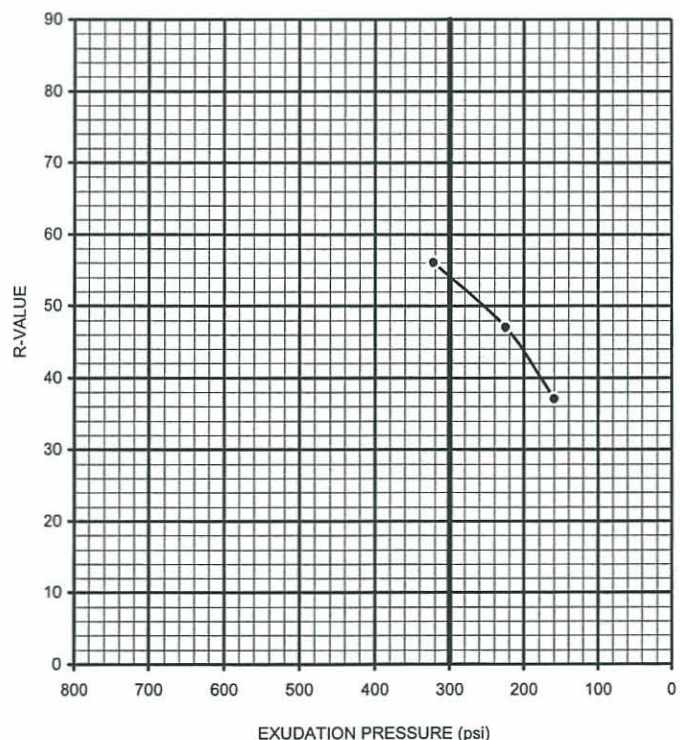
DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.70	0.85	1.01
EXPANSION PRESSURE THICKNESS, ft.	0.53	0.00	0.00

EXPANSION PRESSURE CHART



R-VALUE BY EXPANSION: 59
R-VALUE BY EXUDATION: 54
EQUILIBRIUM R-VALUE: 54

EXUDATION PRESSURE CHART





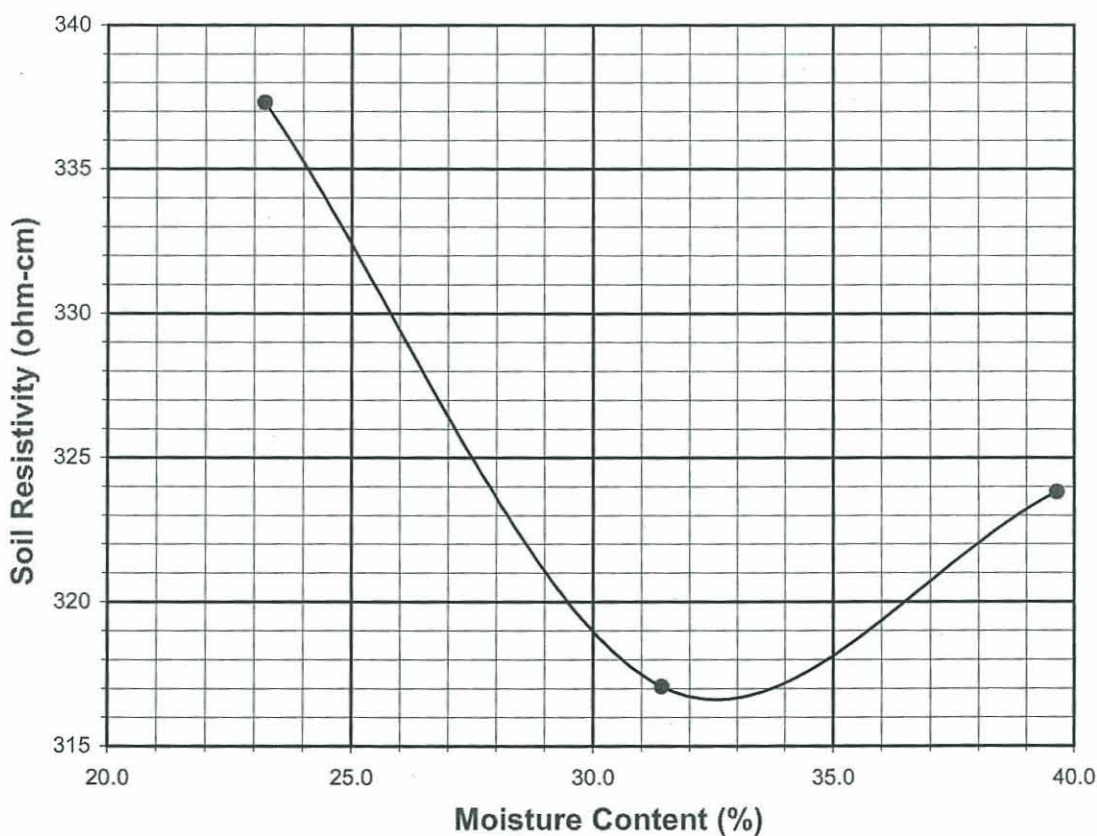
Leighton


SOIL RESISTIVITY TEST**DOT CA TEST 532 / 643**Project Name: Stephen Sorrenson ParkTested By : VJ Date: 04/19/07Project No. : 600804-003Data Input By: LF Date: 04/24/07Boring No.: B-3Depth (ft.) : 0-5Sample No. : Bag-1Soil Identification: SM

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	200	23.22	50	337
2	300	31.43	47	317
3	400	39.65	48	324
4				
5				

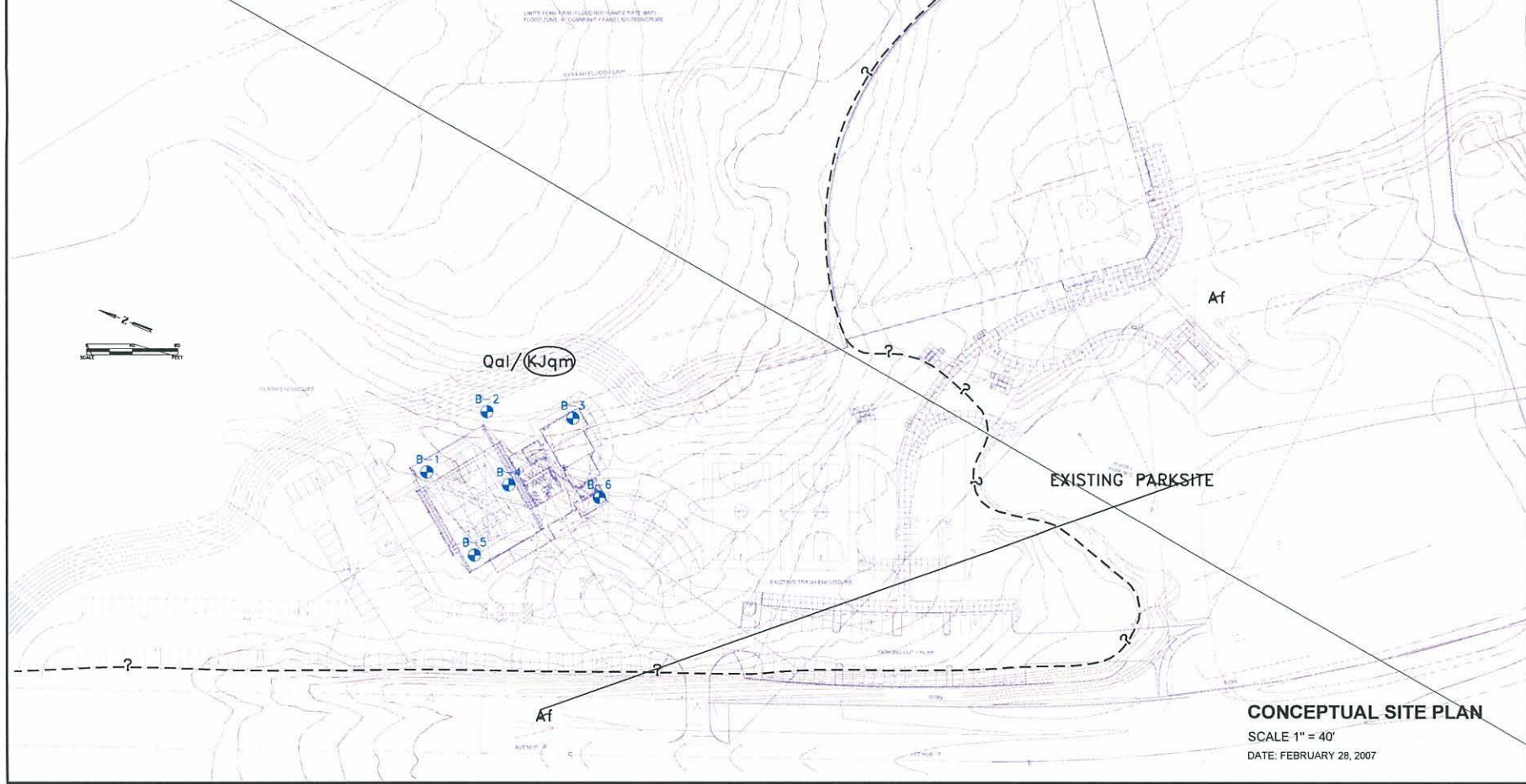
Moisture Content (%) (Mci)	6.79
Wet Wt. of Soil + Cont. (g)	206.78
Dry Wt. of Soil + Cont. (g)	197.89
Wt. of Container (g)	66.93
Container No.	
Initial Soil Wt. (g) (Wt)	1300.00
Box Constant	6.746
$MC = (((1 + Mci / 100) \times (Wa / Wt + 1)) - 1) \times 100$	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 532 / 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 532 / 643	
317	32.5	1148	333	8.46	21.6



GEO-TECHNICAL MAP			
PROPOSED GYMNASIUM AND COMMUNITY BUILDING, STEPHEN SORENSEN PARK			
LAKE LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA			
	Proj: 600304-003	Scale: 1"=40'	Date: 5/07
	Eng/Geol: NMA/JBW	Drafted By: BDT	CR By: BDT
<small>IF QUANTITATIVE INFORMATION IS NOT REPRESENTED, IT IS NOT TO BE USED FOR DESIGN PURPOSES.</small>			

- PLATE-1
- LEGEND**
- Af ARTIFICIAL FILL
 - Qal QUATERNARY ALLUVIUM
 - KJqm QUATERNARY BEDROCK, CIRCLES WHERE BORED
 - B-6 APPROXIMATE LOCATION OF HOLLOW-STEM AUGER BORING (LIGHTEN, 2007)
 - ? GEOLOGIC CONTACT, DASHED WHERE UNCERTAIN



STEPHEN SORENSEN COUNTY PARK PHASE III
Gymnasium and Community Building

CARDEEN
ENGINEERS